

# **Understanding early cessation of exclusive breastfeeding: a mixed method study**

---

Jennifer E. Ayton

BN DipMid (UK) MMR GCR RN RM (IBCLC)

Submitted in fulfilment of the requirements for the degree of Doctor of Philosophy  
(School of Social Sciences)

University of Tasmania

August 2016

## **DECLARATION OF ORIGINALITY**

This thesis contains no material which has been accepted for a degree or diploma by the University or any other institution, except by way of background information and duly acknowledged in the thesis, and to the best of my knowledge and belief no material previously published or written by another person except where due acknowledgement is made in the text of the thesis, nor does the thesis contain any material that infringes copyright.

Signed: .....

Dated: .....30.08.2016.....

### **AUTHORITY OF ACCESS**

This thesis may be made available for loan. Copying and communication of any part of this thesis is prohibited for two years from the date this statement was signed; after that time limited copying and communication is permitted in accordance with the Copyright Act 1968.

Signed: .....

Dated: .....30.08.2016.....

## STATEMENT OF ETHICAL CONDUCT

The research associated with this thesis abides by the international and Australian codes on human and animal experimentation, the guidelines by the Australian Government's Office of the Gene Technology Regulator and the rulings of the Safety, Ethics and Institutional Biosafety Committees of the University.

Signed: .....

Dated: .....30.08.2016.....



## ABSTRACT

This thesis investigates the prevalence of early cessation of exclusive breastfeeding in Australia, with early cessation defined as the point when an infant fed exclusively on breast milk is first fed infant formula or other foods/fluids before the first 6 months of age. The thesis identifies key factors associated with low rates of exclusive breastfeeding, and explores both how mothers experience breastfeeding and the cessation of exclusive breastfeeding.

The research used a mixed methods approach that combined secondary analysis of questionnaire data with qualitative focus group (FG) data. A nationally-representative sample of 22,202 breastfeeding mothers and infant pairs was derived from the 2010 Australian National Infant Feeding Cross-Sectional Survey. This sample was analysed using survival analysis (stratified Cox proportional hazard model) to identify prevalence of exclusive breastfeeding and factors associated with cessation of exclusive breastfeeding within the first 6 months. Data from 22 FGs, involving 108 Tasmanian mother-child pairs was used to explore mothers' experiences of breastfeeding and cessation of exclusive breastfeeding. Pierre Bourdieu's theory of practice provided a theoretically derived framework for the qualitative analysis.

This research revealed that few infants aged less than 6 months, are exclusively breastfed. Half of the national questionnaire sample had ceased exclusive breastfeeding before the first two months. Multiple factors were associated with interrupting exclusivity, with the mothers' partners' preference for bottle-feeding, or having no preference most strongly associated with cessation. The final Cox regression adjusted multivariate model showed that mothers with education levels below bachelor degree, who smoked cigarettes, were obese and or overweight, diagnosed with perinatal depression, had fed their infants expressed milk and used a dummy regularly, and whose infants had not received skin to skin at birth, were independently associated with an increased hazard ratio of interrupting exclusive breastfeeding.

Analysis of FG data found that the preference, to breastfeed appears to be integral to the maternal habitus in Australia. Mothers in the FG study understood breastfeeding

as feeding from the breast, and valued this form of feeding above all other milks and methods because it is viewed as natural. However, the concept of “exclusive breastfeeding” had little relevance for them. Despite the value given to breastfeeding, many women struggle to convert their embodied physical capital (breasts, milk, nipples) to feed their children. Mothers described deploying non-maternal capital such as fathers and dummies as “allofeeding” methods to support breastfeeding. Despite this support, early cessation of exclusive breastfeeding through the use of infant formula is common. A disjuncture thus occurs between practice, what mothers do (use formula) and the maternal habitus, (to breastfeed). As a result, many mothers are unable to “make sense” of their use of formula resulting in powerful feelings of personal and social failure and breastfeeding grief.

This research contributes to public health and sociological understandings of early cessation of exclusive breastfeeding. It identifies factors that are associated with cessation of exclusive breastfeeding, offers insights into how women perceive and experience exclusive breastfeeding and describes what it is like for breastfeeding mothers to cease exclusive breastfeeding through the use of infant formula. Given that interactions between multiple factors are associated with early cessation of exclusive breastfeeding the development of strategies to support exclusive breastfeeding is likely to be challenging. Greater recognition of the value of the allofeeding support provided by fathers (or other partners) and engaging and supporting more fathers to be collaborative breastfeeding partners may be an effective strategy. Reframing breastfeeding as a cooperative practice may also help alleviate that guilt and shame many women experience as a result of disjuncture.

## ACKNOWLEDGMENTS

---

No one has ever become poor by giving.

The Diary of Anne Frank (1952) (Frank, 1997)

---

To those (& you know who you are) who have endured the process with me and given me strength and faith in myself to persevere and complete this process, I am very grateful.

I also wish to acknowledge the important support and mentorship received from my three supervisors: Dr Emily Hansen, Professor Mark Nelson, and Dr Ingrid van der Mei. In particular, I am grateful to Dr Hansen for introducing me to Bourdieu.

I acknowledge my colleague Leigh Tesch, who taught me how to listen to the unsaid and to Dr Karen Wills for her statistical expertise and patience.

This thesis is dedicated to the memory of my mother, who suffered greatly in the quest to care for her children. Rest in peace 1929–2015.

And I am grateful for the life I share with my family—my children and long-suffering husband—who give unconditionally.

## TABLE OF CONTEXTS

Declaration of Originality .....	ii
Authority of access .....	iii
Statement of Ethical Conduct .....	iv
Abstract .....	v
Acknowledgments.....	vii
Table of contexts.....	viii
List of Figures .....	xii
List of tables.....	xiii
Abbreviations.....	xiv
Glossary of terms .....	xv
Statement of Co-Authorship .....	xxi
Statement regarding published work contained in this thesis .....	xxiii
Publications and Presentations.....	xxiv
1. Foreword .....	1
Implications.....	5
Research Aims and Questions .....	6
Research aim .....	6
Research questions .....	6
Quantitative research .....	6
Qualitative research .....	6
2. Literature review .....	8
What is breastfeeding? Historical context.....	9
Exclusive breastfeeding .....	12
Benefits of exclusive breastfeeding .....	13
Patterns and monitoring .....	14
Cessation of exclusive breastfeeding .....	16
Public Health Policies: National and International Policy .....	22
Conclusions.....	23
3. Theoretical framework.....	24

Foucault and risk .....	25
Feminist and sociological writing about breastfeeding.....	27
Pierre Bourdieu: theory of practice .....	28
Habitus.....	30
Field.....	31
Capital: Physical capital .....	33
Conclusion .....	36
4. Methods: Mixed methods approach.....	38
Quantitative research.....	38
Qualitative research .....	38
Research Design.....	38
Ethics.....	40
Phase One: Quantitative Data .....	42
The Australian Institute of Health and Welfare National Infant Feeding Survey .....	42
Study design and sample.....	43
Participants .....	43
Exclusive breastfeeding study ANIFS sub-sample .....	43
Data handling .....	44
Missing data.....	44
Study variables .....	45
Child age parameters .....	48
Infant feeding indicators, terminology, and definitions .....	49
Socioeconomic Status and SEIFA quintiles .....	50
Data Analysis .....	50
Prevalence.....	50
Survival Analysis: Cox Proportional Hazards Regression.....	50
Phase Two: Tasmanian Infant Feeding Study .....	53
Sampling Strategy.....	53
Demographic questionnaire .....	53
FGs: Data Collection.....	54
Data Analysis.....	55
Demographic data .....	55
Focus Group data .....	57
Integration and Summary.....	61
Reflexivity: Questioning knowledge .....	61
Questioning knowledge.....	62
Mothers and reflexivity .....	63

Conclusion .....	65
5. Findings .....	66
Phase 1 Quantitative Survival Analysis .....	66
Mother and infant characteristics .....	66
Cessation of exclusive breastfeeding .....	67
Summary of Phase 1 Quantitative Findings .....	75
Phase 2 Findings: Tasmanian Infant Feeding Study Focus Groups .....	76
Mother and child characteristics .....	76
Mothers .....	76
Infants and Children .....	80
Infant Feeding characteristics .....	80
Group Dynamics: Focus Groups with Mothers .....	82
Thematic Analysis of FGs .....	87
Major Theme One: <i>Field</i> – Motherhood as a Social Space .....	88
A place of struggle: where breast is best .....	88
Endurance .....	93
Major Theme Two: <i>Habitus</i> – Value .....	98
Doxic view: breast is best .....	98
Exclusivity and doxic values .....	99
Maternal <i>Habitus</i> : To Breastfeed .....	102
To breastfeed .....	103
The value of closeness .....	107
Major Theme Three: <i>Capital</i> – Allofeeding .....	109
Allofeeding .....	110
Bottles, teats, dummies .....	114
Expressing .....	117
Public feeding .....	119
Fathers as allofeeders .....	124
Others and kin relationships .....	130
Major Theme Four: .....	133
Practice – Disjuncture: Failure and Grief .....	133
Disjuncture .....	133
Breasts .....	135
The nipple: ‘the naughty bit’ .....	137
Milk from the breast .....	139

Formula feeding: loss and shame .....	141
Loss .....	145
Shame .....	147
Grief—making sense of things .....	149
What we have learnt: Hysteresis .....	153
Conclusion .....	161
6. Discussion .....	163
Major Integrated Findings .....	163
Summary of Findings .....	165
Cessation .....	166
To breastfeed .....	169
Allofeeding: Fathers and dummies .....	172
Other allofeeding: Dummies, bottles, and teats .....	176
Expressing .....	178
The lactating body .....	180
Dilution .....	180
Employment, Age and SIEFA .....	184
Infant formula: making sense of not breastfeeding .....	188
Sadness .....	190
7. Conclusions .....	194
Strengths, limitations and future directions .....	198
References .....	202
Appendices .....	231

## LIST OF FIGURES

Figure 1. Research strategy flow diagram .....	7
Figure 2. Point of cessation of exclusive breastfeeding 0–6 months .....	17
Figure 3. Concurrent sequential mixed methods design study. ....	41
Figure 4. Derivation of the sample 22,202 from the Australian Institute of Health and Welfare (AIHW) 2010 Australian National Infant Feeding Survey (ANIFS).....	44
Figure 5. Illustration of different age concepts used in the ANIFS report (AIHW, 2011a). ....	49
Figure 6. Integrated thematic and theoretical analysis process of the mothers' experiences of cessation of exclusive breastfeeding.....	60
Figure 7. Proportion of infants ceasing exclusive breastfeeding at each age interval from birth to 6 completed months (N=22,202), values are in percentage. ....	68
Figure 8. Kaplan-Meier survival curves for cessation of exclusive breastfeeding by fathers' infant feeding preferences, comparing breastfeeding, bottle feeding, and no preference (p = adjusted for mother age and parity, education level) .....	73
Figure 9. Kaplan-Meier survival curves for cessation of exclusive breastfeeding by regular dummy use by no dummy use (p = adjusted for mother age and parity, education level).....	73
Figure 10. Kaplan-Meier survival curves for cessation of exclusive breastfeeding by perinatal depression, comparing no perinatal depression (p = adjusted for mother age and parity, education level) .....	74
Figure 11. Kaplan-Meier survival curves for cessation of exclusive breastfeeding by SEIFA, comparing quintiles 1st (most disadvantaged) through to least disadvantaged 5th quintiles (least disadvantaged) (p = adjusted for mother age and parity, education level).....	74



## LIST OF TABLES

Table 2.1. Summary of factors contributing to the low rates of exclusive breastfeeding globally. ....	20
Table 4.1. Abductive coding tree for mothers' experiences of stopping breastfeeding. ....	59
Table 5.1. Prevalence, hazard ratios (HRs) and 95% confidence intervals (95% CI) for factors associated with cessation of exclusive breastfeeding within the first six months (N = 22,202). Values are in %(n).....	70
Table 5.2. Characteristics of the mothers who participated in the 22 FGs (N = 108). Values are in (%)n mean $\pm$ standard deviation .....	78
Table 5.3. Infant and child characteristics of the mothers who participated in the 22 FGs (N = 107). Values are in (%)n mean $\pm$ standard deviation) .....	81

## ABBREVIATIONS

ABS	Australian Bureau of Statistics
ADA	Australian Data Archive
AIHW	Australian Institute of Health and Welfare
ANIFS	Australian National Infant Feeding Survey
BMI	Body Mass Index
CHAPS	Child Health and Family Centres
CI	Confidence Interval
$\chi^2$	Chi-Square
df	Degrees of freedom
EBM	Expressed Breast Milk
FG	Focus Group
HR	Hazard Ratio
ICD	International Classification of Diseases
ICC	Integrated Care Centre
MIMR	Menzies Institute for Medical Research (formally Menzies Research Institute Tasmania MRIT)
OR	Odds Ratio
PND	Perinatal Depression
SD	Standard Deviation
SEIFA	Socio-Economic Index For Areas
TIFs	Tasmanian Infant Feeding Study
UK	United Kingdom
US	United States
UNICEF	United Nations Children's Fund
yrs.	Years
WHO	World Health Organisation

## GLOSSARY OF TERMS

Agency	The idea that individual is equipped with the ability to understand and control their own actions regardless of the circumstances of their lives.
Any breastfeeding	The child receives some breast milk but can also receive any food or liquid including non-human milk.
Allomothering/feeding	Meaning the shared provisioning and care of the young.
Alloparenting	See <i>allomothering</i> , includes the use of kin; sister, grandmother, sister in law, father of the child.
Breastfeeding duration	The total length of time a child receives any breast milk from initiation through until weaning is complete.
Breastmilk	Human milk and colostrum (including expressed breast-milk and breast milk from a donor or donor milk bank).
Breastfeeding	The infant/child has received breast milk (direct from the mother or expressed).
Bottle feeding	The infant/child has received liquid (including human milk or non-human milk) or semi solid food from a bottle with a teat.
Breastfeeding substitute	Any milk (other than breastmilk), or food-based fluid used in infant feeding as a replacement for breastmilk, whether or not it is suitable for that purpose (commonly includes infant formula, cow's milk, and other milks fed to infants & children).

Capital	The definition of <i>capital</i> that Bourdieu uses is broad and falls into three principal types: economic (money, mercantile exchange), social (kin, family, social groups) and cultural (education, consumption patterns, tastes, embodied traits) (Bourdieu, 1990b, pp. 53–57; Robbins, 2000a, pp. 75–82).
Complementary feeding	The child receives both breastmilk and any other fluid or food (this may include any food or liquid including non-human milk).
Complementary foods	Any nutrient-containing foods or liquids (other than breast milk) given to children who are receiving breast milk.
Colostrum	The first milk secreted from the breast from the first half of the pregnancy and immediately after birth for up to 5 days postpartum.
Current practices	Very recent infant feeding practices, usually in the previous 24 hours.
Dummy	Also known as a pacifier or soother) An artificial teat typically made of rubber or silicone, on which the child sucks for comfort.
Doxia	Pre-reflective intuitive knowledge shaped by experience, to unconscious inherited physical and relational predispositions (Grenfell, 2008, p 120).
Early cessation	Where the mother has interrupted exclusive breastfeeding with the use of other food or fluids including infant formula before she had intended to and or the recommended first 6 months of the infant's life.

(Ayton, Howes, Hansen, Nelson, 2014; Feldens, Vitolo, Rauber, Cruz, Hilgert, 2012).

Ever breastfed	A child has been put to the breast, if only once, and/or an child has received expressed breast milk or breast milk from a donor or donor milk bank.
Exclusive breastfeeding	Where the infant receives only breast milk from their mother or a wet nurse, or expressed breast milk, and no other liquids or solids with the exception of drops or syrups consisting of vitamins, mineral supplements or medicines including oral rehydration solutions.
Expressed breast milk	Human milk expressed either by hand or with a commercial pump from the breast and used to feed the infant.
Family foods	Soft, semi-solid or solid foods: Any nutrient-containing foods (soft/semi-solid/solid); for example, dilute infant cereals. Does not include breast milk or breast milk substitutes, fruit and vegetable juices, sugar water etc.
Field	The field is defined as the “conjectural site (social arena) in which structural proprieties are embedded in everyday life” (Robbins, 2000a). Social and/or symbolic institutions such as the family, art, science, or biomedical (Bourdieu, 1990b, p. 66).
Formula milk feeding	The infant/child receives (fully or predominantly) non-human milk, includes commercially prepared milks.
Fully breastfed	See <i>predominant breastfeeding</i> .

Gestational period	The gestational period can span between <196 days (27 completed weeks) to 294 days (42 completed weeks) or more.
Habitus	Bourdieu loosely defines this to mean embodied history, internalised as second nature and so forgotten as history consisting of a set of durable dispositions (Bourdieu, 1990b, p. 56).
Hysteresis	Generational change, dislocation of the habitus, social crisis (Grenfell, 2008, p. 131).
Infant	Refers to a child less than 12 month of age. In this report, the term ‘children’ includes infants.
Initiation	The infant was introduced to breast milk at some point. For initiation to exclusive breastfeeding, the infant’s first feed has to be breast milk, colostrum, expressed breast milk or breast milk from a donor or donor milk bank.
Multiparous	A woman who has given birth to a live or stillborn baby more than once.
Lactogenesis	Initiation of milk secretion
Parity	The number of times a woman has given birth (alive or stillborn) to a foetus >24 weeks gestation (see <i>Primiparous and Multiparous</i> ).
Pacifier	See <i>Dummy</i> .
Perinatal Depression	Defined as a range of mood disorders affecting a woman during pregnancy and after the birth of her child)

including prenatal depression, ‘baby blues’, postpartum depression, and postpartum psychosis.

Primiparous	A woman who has given birth to a live or stillborn baby only once.
Predominant breastfeeding	An infant’s predominant source of nourishment is breast milk but the infant may also receive water and water-based drinks (sweetened and flavoured water, teas, infusions etc.); fruit juice; oral rehydration solutions (ORSs); drop and syrup forms of vitamins, minerals and medicines; and ritual fluids (in limited quantities). All other food-based fluids are excluded, in particular non-human milk.
Preterm infant	An infant born before 37 completed weeks ( $37^{0/7}$ ) gestation, 260days from the mothers last menstrual period. Includes sub categories: <ul style="list-style-type: none"> <li>○ Extremely preterm (<math>&lt;28^{0/7}</math> weeks)</li> <li>○ Very preterm (<math>&lt;32^{0/7}</math> weeks)</li> <li>○ Late preterm (<math>34^{0/7}</math> to <math>&lt;36^{6/7}</math> weeks)</li> </ul>
SEIFA	Socio-Economic Indexes for Areas (SEIFAs) are categories that summarise the Socioeconomic conditions of an area. They are derived by the Australian Bureau of Statistics (ABS) from the 2006 population Census.
Skin – Skin	Also known as ‘Kangaroo care’ where the naked infant is placed against the mother or fathers naked chest.
Soft, semi-solid/solid food	Any nutrient –containing foods) soft/semi-solid/solid) i.e. dilute infant cereals. Does not include breastmilk or

breastmilk substitutes, fruit, vegetable juices, sugar water, water.

Term gestation	37 <sup>0/7</sup> weeks (260 days) to 40 weeks' gestation (280 days) from the mothers last menstrual period.
Weaning	The period during which children are introduced to breast milk substitutes and/or solid foods with the intention of replacing some or all of the breast milk in the diet.
Young Child	Young Child refers to a child greater than 12 months of age.
Young mother	Aged <24 years of age. In this thesis the term incorporates teenage mothers (aged 13-19 yrs.)

NOTE: All terms used are consistent with the WHO ICD 10 coding categories and terms (World Health Organization., 2010), WHO and AIHW infant feeding indicators (Australian Institute of Health and Welfare, 2011; World Health Organization., 2007).



## STATEMENT OF CO-AUTHORSHIP

Jennifer Ayton (JA) was responsible for the overall study design of this mixed methods research project. Data from the AIHW 2010 Australian National Infant Feeding Survey (ANIFS) was used for some of this thesis. The cleaning and analysis of this data was conducted by JA. Dr van der Mei specifically supervised the analysis of the ANIFS data. Dr Wills (MIMR) provided statistically guidance. The remainder of data used in this thesis came from the Tasmanian Infant Feeding study (TIFs). This study was funded by the Tasmanian Early Years Foundation in 2011. Jennifer was the lead CI, and together with Dr Hansen and Professor Nelson secured the highly competitive funding to undertake this study. JA was responsible for and was guided by Dr Emily Hansen in the design of the TIF qualitative study and the FG prompts/questions and analysis. Ms Leigh Tesch assisted with collecting the qualitative data as a research assistant for the TIFs. JA was responsible for ethics applications and approvals (including applying for access to the AIHW ANIFS data from the ADA), for the data collection, cleaning and analysis of the data, including recruitment of the study participants.

This thesis includes peer reviewed published papers. JA lead this research in that she conceptualised and designed the project, analysed the two data strands and wrote the funding applications and manuscripts.

### Foreword

Ayton, J., Howes, F., Hansen, E., Nelson M. (2013). Evaluating the prevention of premature cessation of exclusive breastfeeding in the general practice setting during the scheduled child immunisation consultation; a pilot study. *Australian Journal of Primary Health*, 21(3) 299-304.

JA drafted the manuscript, contributed to the study design, undertook the analysis, recruitment and collecting of the data. All named authors reviewed and contributed to the study design, drafting and editing of the manuscript.

### Chapter 4.

Ayton, J., Van der Mei, I., Wills, K., Hansen, E., Nelson, M. (2015). Cumulative risk factors associated with the cessation of exclusive breastfeeding; survival analysis of an Australian national cross sectional survey. *Achieves of Diseases in Childhood*, 100, 863-868.

JA drafted the manuscript and conducted the statistical analysis under the guidance of Dr Van der Mei and Dr Wills. All authors contributed to the co-ordination, reviewing and editing of the manuscript.

Signed:

Primary supervisor

Dated: ....30.08.2016.....

**STATEMENT REGARDING PUBLISHED WORK CONTAINED IN THIS  
THESIS**

“The publishers of the papers comprising Chapters 1, 4, hold the copyright for that content. Access to the material should be sought from the respective journals. The remaining non published content of this thesis may be made available for loan and limited copying and communication in accordance with the Copyright Act 1968”.

## PUBLICATIONS AND PRESENTATIONS

Publications and presentations arising directly from the research described in this thesis

### Foreword

Ayton, J., Howes, F., Hansen, E., Nelson, M. (2013). Evaluating the prevention of premature cessation of exclusive breastfeeding in the general practice setting during the scheduled child immunisation consultation; a pilot study. *Australian Journal of Primary Health*, 21(3), 299-304.

### Chapter 4.

Ayton, J., Van der Mei, I., Wills, K., Hansen, E., & Nelson M. (2015). Cumulative risk factors associated with the cessation of exclusive breastfeeding; survival analysis of an Australian national cross sectional survey. *Archives of Diseases in Childhood*, 100, 863-868.

### Others of relevance but not included in this thesis

Murray, L., Anggrahini, S. M., Woda, R. R., Ayton, J., & Beggs, S. (2016). Exclusive breastfeeding & the acceptability of donor breast milk for sick, hospitalized infants in Kupang, Nusa Tenggara Timur, Indonesia: A mixed-methods study; *Asia-Pacific Journal of Public Health*, 32(3), 438-445.

Ayton, J., Hansen, E. (2015). Complex young lives: collective case study analysis of young fatherhood and breastfeeding. *International Breastfeeding Journal*, 11, 16.

Ayton, J., Hansen, E., Quinn, S., Nelson, M. (2012). Factors associated with initiation & exclusive breastfeeding at hospital discharge: late preterm compared to 37week gestation mother & infant cohort. *International Breastfeeding Journal*, 7, 16.

## Oral presentations

\* presenting author

\* Ayton, J., Van der Mei, I., Wills, K., Hansen, E., & Nelson, M. (2015). Cumulative risk factors associated with the cessation of exclusive breastfeeding; survival analysis of an Australian national cross sectional survey. MIMR/UTAS Research in excellence conference, Hobart, Tasmania, Australia.

\* Ayton, J., Van der Mei, I., Wills, K., Hansen, E., & Nelson, M. (2015). Factors associated with the cessation of exclusive breastfeeding; survival analysis of an Australian national cross sectional survey. Tasmanian Early Years Annual Board Meeting, Hobart, Tasmania, Australia.

\* Ayton, J., Hansen, E., Tesch, L., Nelson, M. (2014). TAS Infant feeding study: Breastfeeding experiences of socially disadvantaged women. MIMR Public Health theme group meeting, Hobart, Tasmania, Australia.

\* Ayton, J., Hansen, E., Tesch, L., Nelson, M. (2014). Tasmanian mother's experiences of breastfeeding and early cessation of exclusive breastfeeding. Tasmanian Early Years Annual Board Meeting, Hobart, Tasmania, Australia.

\* Ayton, J., Hansen, E., Tesch, L., Nelson, M. (2013). 'Breasts, Babies & Bourdieu' an interpretive framework to think with. UTAS School of Arts, Hobart, Tasmania, Australia.

\* Ayton, J., Hansen, E., Tesch, L., Nelson, M. (2013). What we can learn from Tasmanian mother's experiences of breastfeeding and early cessation of exclusive breastfeeding. Mission Australia staff education forum, Hobart, Tasmania, Australia.

\* Ayton, J., Hansen, E., Tesch, L., Nelson, M. (2013). 'Breasts, Babies & Bourdieu'. Petcha Kutcha Presentation Tasmanian Early Years Creative Connections conference, Hobart, Tasmania, Australia.

\*Ayton, J., Hansen, E., Tesch, L., Nelson, M. (2013). Why women stop breastfeeding: TAS Infant Feeding study. UTAS Higher Research Degree conference, Hobart, Tasmania, Australia.

NOTE: JA had two abstracts accepted for two oral presentations; the quantitative phase of the thesis and the findings from the TIFs at the International Conference Nutrition and Nurture in Infancy and Childhood: Bio-Cultural Perspectives UK and Sweden in 2015/16 but due to family bereavement was unable to attend.

## 1. FOREWORD

This thesis investigates the prevalence of early cessation of exclusive breastfeeding, and explores Tasmanian mothers' experiences and how they make sense of interrupting exclusive breastfeeding (using infant formula to replace their breastfeeding). The research was born from a poignant request from a mother and her partner in an early exploratory research study undertaken in 2010–2011, where the author and colleagues were testing the best way to measure and collect “what” mothers did and how they feed their infants in the general practice, primary healthcare setting. However, what the participants in the early study wanted was to tell us [the researchers] was “why they had stopped breastfeeding”. Respecting this, I turned my attention to exploring the “what” and “why” around the cessation of exclusive breastfeeding<sup>1</sup> in the first 6 months of the infant's life.

Originally my PhD project was to be a pilot randomised controlled trial testing an intervention around monitoring infant feeding practices. However, after undertaking the exploratory project, the proposed timing of the intervention (during childhood immunisation appointment with the general practitioner) was found to be unfeasible. The findings of the exploratory project showed that a critical window for any intervention was between the mother and infant discharge from hospital and the first immunisation, when the infant was 6–8 weeks of age. At this time the mother and infant may see an array of healthcare providers or no providers at all. It was noted that at eight weeks post-birth the majority of women had ceased to exclusively breastfeed – meaning that they had introduced food and/or a fluid, namely infant formula milks—despite them choosing and starting breastfeeding soon after birth (Ayton, et al. 2014).

---

<sup>1</sup> Exclusive breastfeeding is defined by the WHO criteria for assessing and monitoring infant feeding practices as a situation where the infant receives only breast milk which can expressed or taken directly from the mother (WHO, 2007).

It appeared that there was tension between what the mothers wanted to do (breastfeed) and the reality of what transpired after birth (using infant formula), resulting in confusion, distress, and a need to talk. Consequently, before any intervention could be designed, it was found to be more appropriate to explore the day-to-day experiences of mothers in an attempt to understand the physical and social complexities surrounding cessation of exclusive breastfeeding. It was at this point that I identified a phenomenon – early cessation – where the mother abruptly interrupts exclusive breastfeeding by introducing infant formula before they had intended, or before the recommended 6-month introduction period.

It is estimated that between 80–90% of Australian mothers choose to start breastfeeding at and around the time of birth, and by 4 months, 39% of infants are exclusively breastfeeding (Australian Institute of Health and Welfare [AIHW], 2011a) (Figure 2 and 3, Appendix 1). To add weight to these figures, a recent national study commissioned by UNICEF and conducted in the United Kingdom found that at three months 17% of British mothers were still exclusively breastfeeding, with only 1% at 6 months. Of those women who had stopped exclusively breastfeeding within the first 6 months, 90% reported that they did so despite originally intending to continue (Boiling, Grant, Hamlyn, & Thornton, 2010). A recent publication in the *Lancet* found that in high-income countries such as Australia, fewer than one in five infants are breastfed by 12 months of life, and stated that the global low rates of exclusive breastfeeding (37% below 6 months) is one of the leading public health challenges (Victora et al., 2016).

Not surprisingly, breastfeeding is a complex and highly personal experience of motherhood. Whether the mother chooses to breastfeed or not, her body will produce milk as a source of nourishment for her infant. As a physical process, lactation is recognised as one of the most metabolically-demanding endocrine activities. It has been compared to running a London marathon each day (Hartmann, Sherriff, & Mitoulas, 1998). The process involves a multitude of hormonal changes and processes that regulate volume, timing, and frequency of milk production by the mammary glands within the breast. These hormones come in to action early in pregnancy and begin laying down the foundation for milk production through the development and proliferation of the milk-making tissues within the breast (Pang & Hartmann, 2007).



The mother may notice these physical changes though breast enlargement, tingling sensations, and/or leaking of colostrum. After the delivery of the placenta—the lactation hormonal gatekeeper – progesterone decreases and thus allows for milk production through the complex interplay of hormones such as prolactin, cortisol, insulin, and oxytocin, and of course the physical action of the infant sucking and removing the milk (Arthur, Kent, & Hartmann, 1991; Kulski & Hartmann, 1981). Each time the mother holds her infant to breastfeed, a feedback mechanism stimulates the release of two key hormones (oxytocin and prolactin), facilitating the transfer of milk and enhancing bonding and attachment. This process is also enhanced by skin-to-skin contact with her infant and the infant sucking at the breast (Moore, Anderson, Bergman, & Dowswell, 2012).

Essentially breastfeeding is a co-dependent relationship between the mother and infant. Mothers' physical ability to breastfeed and produce milk is intimately dependent on the oral feeding abilities of the infant and their ability to frequently remove the milk, particularly in the first 6–8 weeks post-birth (Sakalidis et al., 2012). Infant breastfeeding and maternal milk production problems (i.e. low/delayed maternal milk supply, or an infant's slow-feeding, immature sucking reflex) are commonly associated with any or a combination of range of factors including mode of delivery—namely caesarean section – and obesity, maternal smoking, premature birth, and infant congenital abnormalities such as cleft palates or Down syndrome (Renfrew et al., 2009). However, often to the frustration of many mothers, the aetiology of many breastfeeding problems is unknown.

Breastfeeding is thus a biological, physiological, social, emotional, and embodied process that facilitates the transfer of nutrients and emotional interconnectedness, and which nurtures and shapes the development of the child (Sellen, 2007). Mothers make decisions about how to feed their children based on a range of factors that may include past experiences, family history, and what they know and understand about infant feeding from nutritional and nurturing perspectives (Moffat, 2001). These decisions are also influenced knowingly or unknowingly by health promotion public health campaigns and by the mother's social, cultural, and political environments (Van Esterik, 2002). When the choice is made to breastfeed but breastfeeding is unsuccessful, mothers are often left bereft and confused, citing feelings of failure (Lee,

2008). Women have also described feeling relief and disconnectedness when they have chosen to not breastfeed (Burns, Schmied, Sheehan, & Fenwick, 2010).

For more than three decades, national and international public health bodies have focussed on establishing social health policies with the aim of protecting, promoting, and supporting breastfeeding with the aim of increasing breastfeeding initiation and duration rates. (World Health Organization [WHO]–UNICEF, 2012) Kramer and Kakuma’s (2012) systematic review of the current scientific evidence proved instrumental in the development and authorisation of the current WHO–UNICEF policy (that Australia has also endorsed) of recommending that all infants exclusively breastfeed for 6 months and continue breastfeeding up to 1–2 years and beyond, with timely addition of family foods from 6 months (Kramer & Kakuma, 2012; National Health and Medical Research Council [NHMRC] 2012; WHO–UNICEF, 2003). These policies have been successful at increasing awareness and initiation rates, and in unifying hospital healthcare policies and practices on infant feeding, but have had little effect on extending exclusivity, particularly in developed countries (Victora et al., 2016). It is, as a Lancet (2016) editorial, suggests “one of the few health-positive behaviours more common in poor countries than rich ones” (Lancet, 2016).

Whilst scientific research has added much-needed evidence to support all attempts to improve the number and duration of mothers exclusively breastfeeding their infants, researchers have neglected to explore the inevitable endpoints; cessation and what it means for mothers to stop. Exploring the factors and timing of cessation, namely through the use of infant formula milks, may add some meaning to the numerous valid reasons for women not breastfeeding, such as pain, inconvenience, and lack of support. Therefore, in undertaking a mixed method study, my aim is to estimate the prevalence of cessation and identify key factors, followed by exploring what it is like for mothers to negotiate and interrupt the process of exclusive breastfeeding in the current climate of intense public health and lay pressures to breastfeed. Bourdieu’s theory of practice (*habitus*, *field*, and *capital*) will be employed as a theoretical lens to unpick some of the complexities in day-to-day lives of breastfeeding mothers.

**Implications**

Declining rates of exclusive breastfeeding are an important public health issue. By exploring the complex social processes of early cessation on both a national and more local state-level perspective (Tasmania), I hope to add to the body of evidence by describing the predictors of cessation and then exploring individual realities and the process of cessation from the mothers' perspectives. Attempting to understand cessation from the mothers' perspective is a key component in developing future public health strategies at a population level (Spencer, 2008), and, importantly, to facilitate women and their families to feed their children in the way they have intended. At present, this type of information is not available from a rigorous source; rather, practitioners and policymakers often acquire information anecdotally or through personal observation and or observational data, which ignores the social and behavioural aspects of women's choices and their everyday lives.

## RESEARCH AIMS AND QUESTIONS

### Research aim

To explore the physical and social complexities underlying low rates of exclusive breastfeeding within an infant's first 6 months in Australia.

### Research questions

#### *Quantitative research*

1. What are the national prevalence rates of premature cessation of exclusive breastfeeding from birth up to the first 6 months?
2. What factors are associated with premature cessation of exclusive breastfeeding in the first 6 months?

#### *Qualitative research*

3. What are Tasmanian mothers' experiences of breastfeeding?
4. How are Tasmanian mothers making sense of (what does it mean to them) cessation of exclusive breastfeeding?

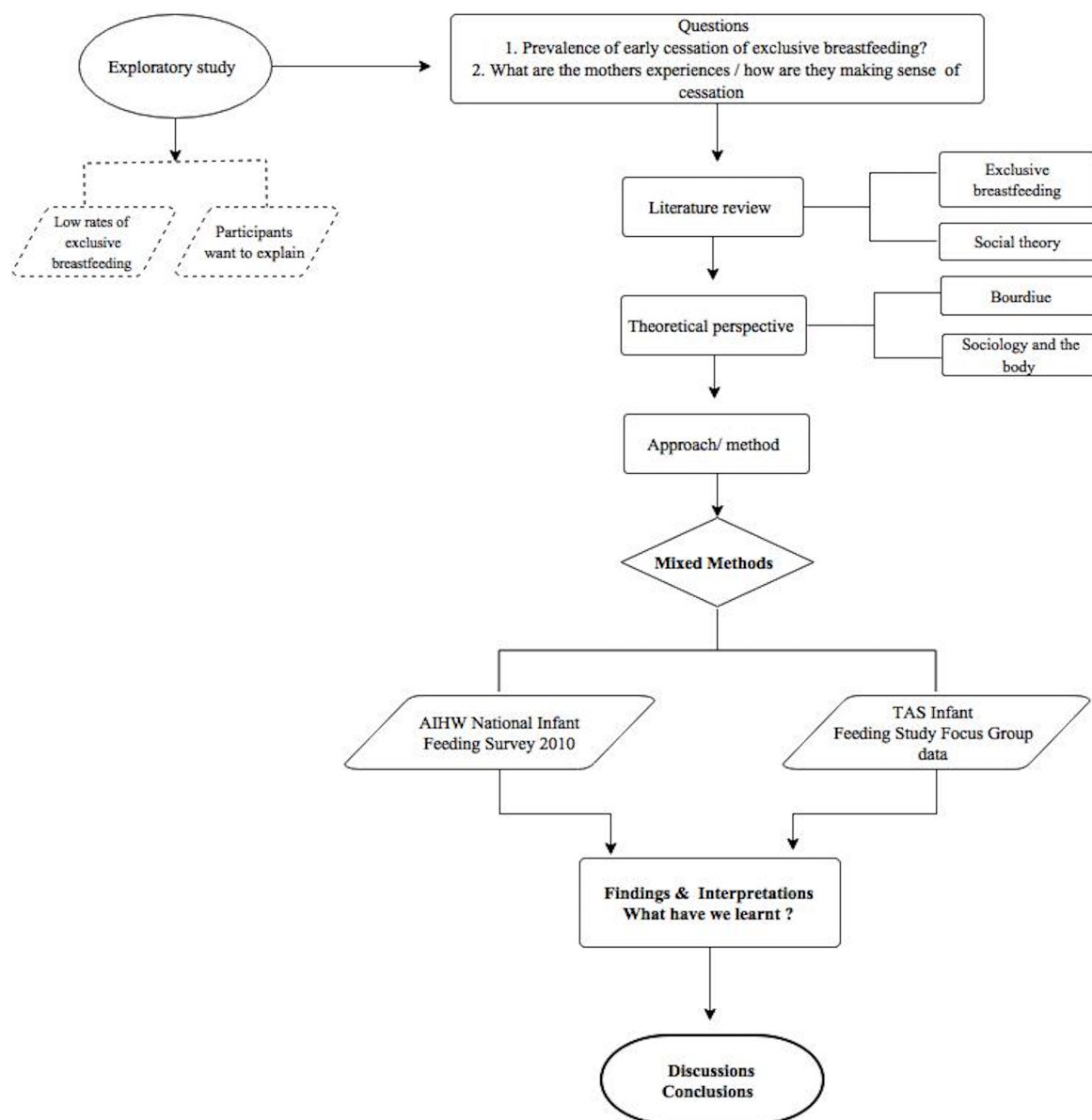


Figure 1. Research strategy flow diagram

## 2. LITERATURE REVIEW

---

All that has been written on the choice of nurse, and the nourishment of children, is hardly anything more than a collective of prejudices.

N. Brouzet (1755)

---

This review chiefly focuses on exclusive breastfeeding of young infants aged less than 6 months, unless otherwise stated. This chapter provides a synopsis of the relevant history of breastfeeding, and empirical evidence surrounding exclusive breastfeeding—and breastfeeding to a lesser degree – as methods of infant feeding.

Substantial scientific and biological evidence exists to support the health and nutrition policies that recommend feeding young infants only breast milk for the first 6 months of life, whether directly from the breast or expressed (including from donors). This evidence also supports an extended partial and slow transition to other foods up to 1–2 years of life (WHO–UNICEF, 2014). Epidemiological evidence over the past three decades provides conclusive evidence of the benefits of exclusive and continued breastfeeding to both the mother and her infant in all settings. These include reduced risk of breast and ovarian cancer, immunological protection for the infant against infections (including diarrheal, respiratory tract, and ear), no growth faltering, reduced incidence of diabetes and obesity in later life, and increased intelligence (Victora et al., 2016).

The physical benefits to the mother and child are dose-dependent, meaning that the longer the child is fed exclusively, the greater the benefit in the first 6 months. Exclusive breastfeeding therefore means that the child does not receive any other foods, or non-human milk, and is solely fed from the breast or with breast milk. Considering that the neonate and young child are primarily suck feeders until about the age of 6 months (da Costa et al., 2010; Sellen, 2007), early cessation occurs when infant formula milks or other fluids are fed to the child to replace breast milk or breastfeeding, using teats, bottles, spoons, or cups. Despite the numerous health, economic, and social benefits of exclusive and continued breastfeeding, only 37% of

children under the age of 6 months are exclusively breastfed worldwide. The duration of exclusive breastfeeding is shorter in well-resourced countries such as Australia (WHO, 2015).

### **What is breastfeeding? Historical context**

History helps to frame and shape the meanings we and mothers give to current infant & child feeding policies, and for this reason the first section of this chapter presents a brief review of the notion of breastfeeding from a historical perspective. The history of infant feeding shows that the maternal breast and breastfeeding is not private, and throughout time the mothers' breasts and her milk – the “elixir of life” – have been objectified (Wickes, 1953a; Fildes, 1986). Scientists, anthropologists, medical/health practitioners and special interest groups have documented the physiology and cultural/social significance of the lactating breast and what it produces. Looking at breastfeeding across time, and the disciplines that have sought to control or understand it, tells us that there has been a “remarkable tendency to obscure the natural method of infant feeding” (Wickes, 1953a). It is, therefore, difficult to clearly outline the historical patterns of breast/milk feedings. What is clear is that there have always been alternatives and numerous ways to feed or supplement an infant's early milk-based diet. Equally, breastfeeding (to feed from the breast), has always been highly valued for its health status, and for its religious, cultural, and social significance.

The historical perspectives establish a basis to then explore the biomedical health construct of *exclusive breastfeeding*. The relevant literature on exclusive breastfeeding and its construction as a health concept is summarised, as well as the documented physical benefits, patterns, and monitoring of exclusive breastfeeding. Early cessation of exclusive breastfeeding is defined and the known social disparities and relevant public health policies—including the literature on mothers returning to work—are concisely reviewed.

From the anthropological studies and historical writings (predominantly European), the young infant and neonates (< 28 days of age) (WHO, 2010) feeding practices have varied widely over time. The timing of feeding and what the infant was fed were closely aligned with the customs, religious beliefs, lay epidemiology, scientific, and medical beliefs of the day (Clendening, 1942; Fildes, 1986a). Today, our

understanding of breastfeeding is dominated by biological and physiological scientific evidence that factually describes what the breast is, what it produces, and who should receive the milk. Policies, health recommendations, and regulations are based on these facts and internalised by modern society. The mother is relatively absent as a person because of the overriding needs and health of the dependent child (Blum, 2000a). It is almost as if we have come full circle from ancient times, when women were revered and “suckled” their own and sometimes other children to keep them alive and safe, to abandoning the breast and trusting artificially manufactured milks, and then back again to valuing breast milk for its protective healing qualities. Now, breastfeeding is framed as “normal” and a health intervention to reduce “infant and child” morbidity and mortality (Bhutta et al., 2008; Fildes, 1980; WHO–UNICEF, 2012, 2014). The WHO states that:

Breastfeeding is the normal way of providing young infants with the nutrients they need for healthy growth and development. Breastfeeding is one of the most effective ways to ensure child health and survival (WHO, 2016).

Breastfeeding and the use of breastmilk has changed over time. Historically, to breast feed was to “suckle the childe”, to feed directly from the breast (Fildes, 1986a). Many expressions have been used to describe what breastfeeding is, including to suckle, to nurse, to nurture, feed from the “pappe”, put to the breast, “gevyng of sucke”, “mother’s milke”, “geve it sucke”, “geve the infant sucke her selfe”, “suffered to suck”, “infant applied to the mothers’ breasts” (Clendening, 1942; Fildes, 1986a; Wickes, 1953a). All, appear to have the same meaning; to directly feed from the breast or provide breast milk. Historical writings framed the “business of nursing” within the context of “Nature directs; if we follow nature, instead of leading or driving it, we cannot err” (Clendening, 1942, p. 178). In the late 19th and early 20th centuries, the way the term breastfeeding was used summarised the multiple discourses around infant feeding, and distinguished between other milk feeds (Wickes, 1953c, 1953d). The heightened social and physical value of human milk as a “cure all” and breastfeeding as a nurturing practice has been well documented over time. Traditionally, it has been the evolutionary biological practice (Sellen, 2009). In ancient civilisations, breastfeeding and the feeding of breast milk to children for extended durations has been the social and cultural norm to promote life. Often the



measure of breastfeeding (timing, frequency, duration, and exclusivity) and the provider varied, with many cultures delaying initiation by up to four days and allowing the infant to feed from other women (kin) and/or to receive additional foods or cultural fluids (Wickes, 1953a). Historically, commentators have observed “that the mother’s milk was more agreeable to the infant than any other women’s” (Clendening 1942, p. 172) and so maternal breastfeeding and milk prevailed as the superior sources of medicinal and moral goodness (Wickes, 1953a). Thomas Muffett (1553–1604) is quoted by Wickes:

Neither is women's milk best onely for young and tender infants, but also for men and women of riper years, fallen by age or by sickness into compositions. Best, I mean in the way of nourishment. For otherwise asses’ milk is best. (Wickes, 1953a).

The physical acts of feeding the child at the maternal breast and with “mothers milk” were valued above all other methods and milks, especially cow’s milk (Wickes, 1953a). This was because breastfeeding offered protection from predators, dangers, and diseases. Breast milk was also used through ancient India, Greece, Egypt, and Rome as a medicinal and social remedy for such ailments as burns, cataracts, eczema, stomach disorders, and to cleanse impurities (Fildes, 1986a, pp. 1–16. The practice of feeding from the left breast closest to the heart continued from approximately 3000 BC into the Christian era, where the ability to “bear and suckle an infant” was seen as a gift from God. Indeed, breastfeeding women were socially elevated to goddess like status by some writers (Fildes, 1986a).

The breast and breastfeeding were not seen as private. Rather, breastfeeding was viewed as a shared practice amongst women their children, and other women. Anthropological writings describe how the mother principally breastfed at or soon after birth often shared the role with a kin – sister, grandmother, sister-in-law—also known as allomothering or alloparenting (Blaffer Hrdy, 2009, pp. 30–31). If the mother could not breastfeed, or when it was against the social custom for mothers to feed their child, a wet nurse “of good health and social standing” was employed as part of the family, occupying an important place both in the family and society (Clendening, 1942; Fildes, 1986b). However, wet nurses’ milk was sometimes viewed with suspicion because of the risk of social and moral contamination to the child

through the passage of her milk (Wickes, 1953a). Thus, we can see the social, cultural, and biophysical importance placed on breastfeeding and breast milk (Clendening, 1942; Fildes, 1986a; Forsyth, 1911).

### **Exclusive breastfeeding**

From the historical writings discussed earlier it is difficult to establish a clear pattern of breastfeeding and weaning at least up until the 19th century. It is clear that newborns and infants were predominantly breastfed from the breast or with breast milk. However, they also simultaneously received other cultural fluids or milks (such as tea, “spiced” water, alcohol, and cows, asses, and goat milks) and “pap” foods, and thus exclusive breastfeeding may not have existed. These foods were not used to wean the infant, but to supplement the suck/milk feeding, or for religious and cultural meanings which are vast and varied (Wickes, 1953a), and will not be discussed here. The consequences of these practices were that many infants died (Fildes, 1980; Wickes, 1953b). The emergence of hand feeding and artificial milks and bottles were documented in early social histories. Breast milk and feeding substitutes and replacements (including wet nurses) were prestigious because they were used by wealthy women of higher social classes. Breastfeeding consequently became associated with the poor (Anonymous (Medical Annotations). 1858; Ballantyne, 1908; Fildes, 1986; Wickes, 1953d).

In 1990, UNICEF-WHO Innocenti Declaration and other international health agencies attempted to secure breastfeeding as the normal way to feed infants and young children (UNICEF-WHO, 1990). A long journey of difficult negotiations and compromise preceded this declaration in an attempt to establish a global strategy to protect the health of children and mothers worldwide. Together with other initiatives (WHO Executive Board, 1979) this declaration documented the definition of *exclusive breastfeeding* that is used today: it applies to an infant who receives only breast milk (including expressed breast milk) and no other liquid or solid food with the exception of vitamins drops and syrups (WHO-UNICEF, 2012; WHO, 2007).

However, each culture, social setting, and era appears to have differing instructions on how long an child should breastfeed and when to introduce other food or fluids (Fildes, 1986a; Van Esterik, 2002). The concept of exclusivity, where the infant

receives only breast milk, is likely to have been a response to the introduction of and commercialisation of artificial milks and subsequent high infant mortality rates in developing countries in the mid-20th century. Mephem (1993) refers to this period as the era of technology and medicalisation of infant feeding, where the abandonment of breastfeeding occurred and the acceptance of and experimentation with the use of artificial feeding commenced (Mephem, 1993).

What is clear is that supporting the continuation of exclusive breastfeeding is essential for child survival, particularly in developing countries where the use of poor quality and contaminated foods and other milks is associated with high rates of morbidity (WHO, 2001). Anthropological evidence also suggests that the human infant is not physiologically capable of dealing with foods until around 6 months. Sellen (2007) refers to this as the transition period of infant feeding practices, where family-based foods are introduced until weaning from breastfeeding is completed. (Sellen, 2007).

### **Benefits of exclusive breastfeeding**

Exclusive breastfeeding is considered to be the “gold standard” and “optimal” infant nutrition for the first 6 months of an infant’s life (NHMRC, 2012; WHO–UNICEF, 2003). Critics of this recommended duration of exclusive breastfeeding (first 6 months) have requested a review of the evidence, suggesting that the known benefits are confined to the first 2–3 months of life. They hypothesise that infants—particularly from developed countries—may suffer from adverse effects, namely iron deficiency, and that extended exclusivity does not meet the nutritional needs of the average child (Fewtrell et al., 2007). There is also debate about the extent to which the current recommendations fit with care-giving behaviours across the breadth of cultures, societies, and environments (Fewtrell et al., 2007; Blum, 1993).

Scientific evidence shows that exclusive breastfeeding (up to about 6 months) and continued breastfeeding up to 2 years has considerable benefit to both maternal, neonatal, infant, and child health in reducing non-communicable diseases such as cancer and metabolic diseases (Requejo et al., 2015; Sankar et al., 2015). Breastfeeding affords the mother and child with protection against short and long-term preventable diseases, and supports all the nutritional needs of the growing infant, both developmentally and physiologically (Giugliani, Horta, Loret de Mola, Lisboa,

& Victora, 2015; Kramer & Kakuma, 2012). The most recent meta-analysis of pooled data from both developed and undeveloped countries suggests that exclusively breastfed infants (0–6 months) have a 12% lower risk of death compared with those infants who were not breastfed. This is particularly important for developing country settings where “sub optimal feeding practices” (early feeding of other fluids and foods before 6 months) contribute to 11.6% mortality in children under five years of age (Victora et al., 2016; WHO-UNICEF, 2014). Of relevance to high-income countries, a strong protective effect was found against sudden infant death syndrome (reduced risk of 36%) –and also against infant and childhood infections, (diarrheal and respiratory tract), and dental malocclusions. There was also a reduced risk of childhood and adult obesity and diabetes, and increases in intelligence. No relationship was found for allergic conditions (such as asthma) or cardiovascular-related diseases, including hypertension. The authors found an increase in tooth decay in children who breastfed nocturnally for longer periods, beyond 12 months of age. For all groups, (including developing countries and disadvantaged populations) exclusive breastfeeding offered protection against life-threatening diseases such as gastroenteritis, and to a lesser extent respiratory infections (Victora et al., 2016). The benefits are age and dose respondent; with extended exclusivity increasing protection into the second year of life. Combined observational and clinical trials provide strong evidence to support continued exclusive breastfeeding up to 6 months, showing that the delayed feeding of non-breast milk fluids (formula milks, water, teas, juice) or foods did not cause any faltering in child growth or nutritional compromise for children in their first year of life (Bhutta, 2013; Kramer & Kakuma, 2012; WHO, 2001).

### **Patterns and monitoring**

Up until the recent Australian National Infant feeding survey (AIHW, 2010) it has been difficult to generalise and accurately estimating who exclusively breastfeeds and for how long due to methodological errors in definitions and data collection. It has therefore been clearer to use ‘any breastfeeding’ (the child receives some breast milk but can also receive any food or liquid including non-human milk) as a way of estimating population breastfeeding prevalence generally (WHO, 2011; Binns ) Consequently from the data available, over the past 50 years a decline in both the incidence and duration of “any breastfeeding” has been observed within Australia and globally (Bhutta & Salam, 2012). In the early 20th century approximately 70% of

women began breastfeeding after giving birth, this dropped to 50% in the mid-1930's (Hirschman & Butler, 1981). By 1970 less than 25% of mothers were practicing any breastfeeding. It then took three decades to increase the initiation rate of breastfeeding to approximately 60%. The duration rate of "any breastfeeding" did not reach above 20% during 1970–1990 in both the United States and Australia (Thompson, Kildea, Barclay, & Kruske, 2011; Wright & Schanler, 2001). These rates not only reflect the low any breastfeeding rate but suggest a low exclusive breastfeeding rate.

The WHO and UNICEF 2015's Fifth Global Nutrition Target is to increase the rate of exclusive breastfeeding in the first 6 months up to 50% (WHO–UNICEF, 2014). However, WHO recently estimated that two out of three infants worldwide (aged less than 6 months) are not exclusively breastfed (WHO, UNICEF, & International Baby Food Action Network, 2016). Increasing exclusive breastfeeding could prevent 823,000 annual deaths in children younger than 5 years, and 20,000 annual deaths from breast cancer (Victora et al., 2016).

Currently, amongst all social and economic groups it is estimated that 80–90% of women in Australia commence breastfeeding at or around the time of birth (AIHW, 2012a). (Appendix 3, Figure 7 -8) This large increase has largely been the result of international and national public health policies and promotional campaigns, such as the global implementation of the Baby Friendly Health Initiative (BFHI) (WHO–UNICEF, 2003). Australia is one of the few countries in the world to have adopted the BFHI policy nationally. The initiative's '10 steps to successful breastfeeding' provides health institutions with a guiding policy to promote and support breastfeeding, including recommendations that mothers not use teats, bottles or pacifiers, and that they use no other top-up or complementary feeds other than breast milk (Baby Friendly Health Initiative Australia., 2007a).

These public health campaigns have had less impact on sustaining breastfeeding, in particular exclusive breastfeeding. Data from the Longitudinal Study of Australian Children in 2008 showed an exclusive breastfeeding initiation rate of 92%, but noted a steady decline in "any breastfeeding" for each month of age after that (Australian Institute of Family Studies. 2008). It is estimated the exclusive breastfeeding rate is much lower. Indeed, the most recent data from a national representative sample of

mothers across Australia, indicated that as few as 15% of infants continued to be exclusively breastfed up to 5 months (less than 6 months) (AIHW, 2011a). This falls dramatically short of the NHMRC and Australian Health Ministers' Conference Australian breastfeeding strategy target of 80% (Australian Health Ministers' Conference, 2009; NHMRC, 2003).

Monitoring how women breastfeed and for how long is vital in helping identify relationships between breastfeeding and short and long-term health outcomes. However, measuring breastfeeding is a complex matter. The use of many different ways of defining and categorising different methods and types of infant feeding, including breastfeeding, has "muddied the waters", making it difficult to assess the positive and negative effects, particularly in regards to exclusive breastfeeding at a population levels (Hector, 2011). The point (in terms of infant age) of cessation is vital in establishing clearer boundary points for accurate monitoring of duration (Hector, 2011). Exclusive breastfeeding is seen as a continuum; the process ceases once something other than breast milk is introduced. It is thus important to examine at what point exclusive breastfeeding is interrupted. For example, if a mother gives the infant one drink of formula at 4 days but continues to breastfeed without any other interruptions through to 6 months, exclusivity actually ceases at 4 days of age, not 6 months.

### **Cessation of exclusive breastfeeding**

To date, what occurs at the time of cessation (including mothers' experiences) have received less attention than the science and health benefits of breastfeeding and lactation. There is no unified definition of early cessation of exclusive breastfeeding. Consequently, based on the available studies addressing cessation and stopping of "any breastfeeding" and the WHO working definitions for all other infant feeding practices (WHO, 2007), early cessation of exclusive breastfeeding is defined as when a mother abruptly stops exclusively breastfeeding (including expressed breast milk feeding) her infant by introducing another food or fluid (including nonhuman milks) to the infant, either before she had intended to stop, or before the recommended 6 months (Ayton et al., 2014; Feldens et al., 2012). This event is pictorially illustrated in Sellen's (2007) adapted diagram (Figure 2) (Sellen, 2007). The red line indicates the event of cessation where fluids such as other milks, teas, and water are introduced.

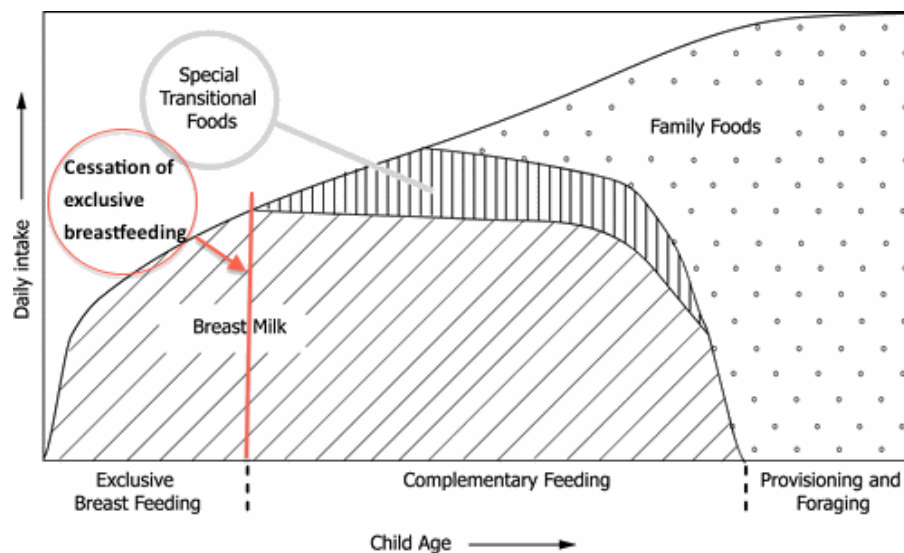


Figure 2. Point of cessation of exclusive breastfeeding 0–6 months.

Source: Sellen, 2007, pp. 123–148.

Research about exclusive breastfeeding has focused on the duration of exclusive and any breastfeeding, and little attention has been given to cessation. Over the past decade, the factors found independently to predict early cessation of any and/or exclusive breastfeeding within the first year of life include (in order of frequency): delayed lactogenesis ( $> 3$  days postpartum), parity (first time mothers), breastfeeding problems within the first month (sore nipples, pain), low maternal education levels, maternal anxiety or depression, infant feeding practices in hospitals, returning to work, preterm infant, and dummy use within the first month (Ayton, Hansen, Quinn, & Nelson, 2012; Donnan et al., 2013; Feldens, Vitolo, Rauber, Cruz, & Hilgert, 2012; Guillermo, Gonzalez-Perez, Vega-Lopez, & Samuel R, 2010; Hauck, Fenwick, Dhaliwal, & Butt, 2011; Jessri, Farmer, Maximova, Willows, & Bell, 2013; Laws, Tracy, & Sullivan, 2010; Lewallen, Dick, Wall et al., 2006; Mirkovic, Perrine, Scanlon, & Grummer-Strawn, 2014; Mortazavi et al., 2015; Spencer, 2008; Tarrant et al., 2015; Thomas-Jackson et al., 2015).

Mothers have explained their difficulties with continuing to breastfeed, citing reasons such as insufficient milk supply, anxiety, lack of support from health professionals and partner, maternal or infant illness such as hypoglycaemia and low weight gain, maternal medications, and infant sleep or settling difficulties (Burns et al., 2010;

Odom, Li, Scanlon, Perrine, & Grummer-Strawn, 2013; Oribe et al., 2015; Walsh, Kearney, & Dennis, 2015). Many women who stop before 4 months felt forced to stop breastfeeding by apparently insurmountable physical difficulties such as low milk supply and nipple pain (Hauck et al., 2011). Many mothers see this as a personal failure that is followed by a period of grief (Boiling, Grant, Hamlyn, & Thornton, 2005; Ryan & Grace, 2001; Shakespeare, Blake, & Garcia, 2004).

A range of demographic, social, and medical factors are associated with early cessation of breastfeeding. A Western Australian study of 2000 women found that younger maternal age, primiparous (first time mothers) women, lower maternal education levels, and caesarean birth were significant independent predictors of early cessation (Hauck et al., 2011). A New Zealand-based study in 2004 identified that women were more likely to stop any breastfeeding before 6 weeks if they smoked and did not receive support, and if they were socially disadvantaged (low income/low education levels) (Butler, Williams, Tukuitonga, & Paterson, 2004). A questionnaire-based study involving 1,036 mother-infant pairs found that being a first-time mother, having low socioeconomic status, being un-married or experiencing maternal health problems were all predictive of breastfeeding failure within the first month of delivery (Guillermo et al., 2010). Pacifier use (dummy) and bottle-feeding, poor social support, and maternal smoking have also been negatively associated with early cessation of both exclusive breastfeeding and any breastfeeding within the first year (Butler et al., 2004; Feldens et al., 2012; Kehler, Chaput, & Tough, 2009). Feldens et al. (2012) found that women of low socioeconomic status and with maternal depression symptoms were twice as likely to cease within the first year (Feldens et al., 2012).

For breastfeeding women, returning to paid work—or the “intention” to return to work—reduces the duration of any breastfeeding (NHMRC, 2012). Interventions such as paid paternity and maternity leave are recommended as an investment in the family (Rollins et al., 2016). Women face many issues when returning to work and breastfeeding: negotiating time and location to express breast milk at work, childcare, illness, emotional stress of separation, and cost of time and equipment to necessitate bottle feeding and expressing (Commonwealth of Australia, 2007). Several European countries have introduced policies that address the difficulties breastfeeding mothers face when returning to work (Cattaneo, Yngve, Koletzko, & Guzman, 2005; Haas,



2003). These include supporting returning to work part-time, paid maternity leave, and paid paternity leave. Countries such as Finland and Norway have had systems of up to 12 months' paid maternity or paternity leave, and they also have positive breastfeeding cultures (Kristiansen, Lande, Overby, & Andersen, 2010). Exclusive breastfeeding rates in Norway are higher than in Australia: at 3 months of age, 65% of infants in Norway are exclusively breastfed compared to 39% in Australia. The numbers then decline in both countries to 10% and 2% respectively at 6 months of age (Kristiansen et al., 2010; AIHW, 2011a).

The lack of a workplace breastfeeding policy has been recognised as an important issue for Australian breastfeeding women and families, as 1 in 10 Australian women who intend to continue to breastfeed return to employment within the first 12 months after birth (Commonwealth of Australia, 2007). Cooklin, Donath, and Amir (2008) found that fewer Australian women who were employed full-time were breastfeeding their infant at 6 months, concluding that full-time employment contributes to premature cessation (Cooklin et al., 2008). A universal paid maternity leave scheme was introduced in Australia at the beginning of 2012 (Hanel, 2012). However, paid maternity leave is not available in many other countries (Baker & Milligan, 2008; Calnen, 2007; Heymann & Kramer, 2009). Globally, lower-educated, lower-paid employees and part-time employees do not have equal access to paid or unpaid maternity leave (Hanel, 2012).

Other factors associated with the decline in continued breastfeeding include a mix of maternal and child physical factors and sociocultural and health-related behavioural factors, including: low milk supply (Cregan, Mitoulas, & Hartmann, 2002; Lewallen, Dick, Flowers et al., 2006), infant sex (male), low prolactin levels (important for the production of milk) (Hartmann & Prosser, 1984), physical breast asymmetry, infant illness, and infant prematurity (Cregan, De Mello, Kershaw, McDougall, & Hartmann, 2002), parity, maternal education (Bertini et al., 2003), smoking (Donath & Amir, 2004), pacifier use (Barros et al., 1997), delayed initiation and the return to the workforce (Thompson et al., 2011), heavy marketing of artificial milks and the undermining of breast milk (WHO, 2001), negative public attitudes to breastfeeding (Spurles & Babineau, 2011), lack of partner and family support (Baghurst et al., 2007), and access to services and maternal anxiety depression (Kramer et al., 2003). The

WHO states that “inadequate rates of exclusive breastfeeding result from social and cultural, health-system and commercial factors, as well as poor knowledge about breastfeeding” (WHO et al., 2016). These are summarised in the following table;

*Table 2.1. Summary of factors contributing to the low rates of exclusive breastfeeding globally.*

<b>Personal/social/cultural</b>	<ul style="list-style-type: none"> <li>• Lack of knowledge on the dangers of not exclusively breastfeeding and of proper breastfeeding techniques among women, their partners, families, healthcare providers, and policymakers.</li> </ul>
<b>Social/cultural</b>	<ul style="list-style-type: none"> <li>• Caregiver and societal beliefs favouring mixed feeding (i.e. believing an infant needs additional liquids or solids before 6 months because breast milk alone is not adequate).</li> </ul>
<b>Biomedical</b>	<ul style="list-style-type: none"> <li>• Hospital and healthcare practices and policies that are not supportive of breastfeeding.</li> </ul>
<b>Biomedical</b>	<ul style="list-style-type: none"> <li>• Lack of adequate skilled support (in health facilities and in the community).</li> </ul>
<b>Commercial</b>	<ul style="list-style-type: none"> <li>• Aggressive promotion of infant formula, milk powder, and other breast-milk substitutes.</li> </ul>
<b>Social</b>	<ul style="list-style-type: none"> <li>• Inadequate maternity and paternity leave legislation and other workplace policies that support a woman’s ability to breastfeed when she returns to work.</li> </ul>

Source: Global nutrition targets 2025: breastfeeding policy brief (WHO–UNICEF, 2014, p. 2–3).

Social determinants (the conditions in which people are born, grow, live, work, and age, including the health system) have been referred to as the “causes of causes” and are thus understood to be responsible for the majority of health inequities defined as the unfair and avoidable differences in health status seen within and between groups of people (Hunter, Neiger, & West, 2011). These circumstances are shaped by the distribution of money, power, and resources at global, national, and local levels. Poverty and deprivation have long been considered a significant predictor of infant and maternal morbidity and mortality (Barker, 2007). Whilst lack of money and

material goods are associated with grades of poverty and disadvantage, deprivation is considered a much more serious, wider, and insidious issue. Deprivation incorporates acute and or chronic environmental, social, and physical disadvantage in the forms of lack of social, household, and educational attainment (WHO, 2011). Multiple individual, area-focused, and collective methods are used for assessing the social circumstances of families and mothers as indicators of socioeconomic status. These include tax bands, and collective area measures such as Australia's Index of Relative Socio-economic Advantage and Disadvantage (IRSAD) and Socio-Economic Indexes for Area (SEIFA), designed to assess deprivation by area and not the individual (Pink, 2011a). The UK uses similar indices of deprivation to identify the most disadvantaged areas (WHO, 2011).

In regards to infant feeding, breastfeeding practices are not equal across social economic groups. Low exclusive breastfeeding initiation and continuation rates are strongly associated with deprivation and poverty in wealthy countries such as the UK and Australia (AIHW, 2011a; Boiling et al., 2010). Several studies have identified social disparities such as food insecurity, and economic and social poverty (Webb-Girard et al., 2012; Wolf, 2003; Yngve & Sjostrom, 2001) as having a negative effect on prolonged breastfeeding and the subsequent health and development of infants and children (Wise, 2009). In Australia, the UK and the United States, exclusive breastfeeding is lowest amongst young and socially-disadvantaged women, rural women, and ethnic minorities compared to their more educated and affluent counterparts (Brown, Raynor, Benton, & Lee, 2009; Donath & Amir, 2000). These social disparities have been attributed to a "bottle-feeding culture amongst young and socially disadvantaged mothers" (Scott & Mostyn, 2003). Limited exposure to breastfeeding, marketing of infant formulas, and poor maternal confidence has led to infant formula-feeding becoming a generational social norm in these settings (McFadden et al., 2016; Rayfield, Oakley, & Quigley, 2015). Although in high-income and lower to middle-income countries more women elect to commence breastfeeding, marginalised groups of mothers such as ethnic minorities, teenage mothers, those on low incomes, mothers of preterm infants born before 37 completed weeks of gestation, and new immigrants are more likely to interrupt the process of exclusivity soon after hospital discharge, or do not commence breastfeeding at all

(Barton, 2001; Burns et al., 2010; Donath & Amir, 2000; Hauck et al., 2011; MacVicar, Kirkpatrick, Humphrey, & Forbes-McKay, 2015; Victora et al., 2016).

### **Public Health Policies: National and International Policy**

The jointly-developed World Health Organization and United Nations Global Strategy for Infant and Young Child Feeding, and other public health promotional campaigns and policies, were a response to increasing infant morbidity rates due to poor infant feeding practices (WHO, 1998; WHO–UNICEF, 1989, 2008). Together, they provide comprehensive frameworks for promoting, protecting, and supporting appropriate and optimal infant feeding practices to reduce infant and child mortality and morbidity caused by malnutrition and poor neonatal and infant feeding practices (WHO–UNICEF, 2003). Policy documents such as the global strategy, the BFHI's Ten Steps to Successful Breastfeeding and the Innocenti Declaration (UNICEF–WHO, 1990; WHO–UNICEF, 2003, 2012) (Appendix 1-2), are endorsed and supported by Australian national health organisational bodies (Australian College of Midwives, 1998; Baby Friendly Health Initiative Australia, 2007a; NHMRC, 2003, 2013; WHO–UNICEF, 2009), and provide stimulus for other health authorities to establish national working documents such as the 2010 Australian Breastfeeding Strategy (Australian Health Ministers' Conference, 2009).

Consequently, key professional bodies within Australia have endorsed the WHO–UNICEF recommendations with the aim of promoting breastfeeding as the “optimal nutrition” for infants in the first 6 months of life (Baby Friendly Health Initiative Australia, 2007a; International Board of Lactation Consultants, 2007; NHMRC 2003; Royal Australasian College of Physicians, 2009; WHO–UNICEF, 1989). Lay organisations such as the Australian Breastfeeding Association (formerly Australian Nursing Mothers) and La Leche League International have also maintained intense campaigns and provided support for breastfeeding and breastfeeding women over the past decade. Australia now includes the number of infants exclusively breastfeeding up to 4 months as a key headline indicator as an outcome for the measurement of infant/child health and wellbeing (Australian Health Ministers' Conference, 2009; AIHW, 2011b).

### **Conclusions**

This thesis and review does not focus on examining the pros or cons of breastfeeding. Instead, the emphasis is on exclusivity, and on cessation when other fluids—namely infant formula—are introduced. The history of infant feeding shows that the maternal breast and breastfeeding is not private, and throughout time a mother's breasts and her milk—the “elixir of life”—have been objectified. Scientists, anthropologists, medical/health practitioners, and special interest groups have documented the physiology and cultural-social significance of the lactating breast and what it produces. Looking at breastfeeding across time, and the disciplines that have sought to control or understand breastfeeding, tells us that there has been a “remarkable tendency to obscure the natural method of infant feeding” (Wickes, 1953a). It is therefore difficult to clearly outline historical patterns of breast-milk feedings. What is clear is that there have always been alternatives and numerous ways to feed or supplement an infant's early milk-based diet. Equally, breastfeeding has always been highly valued for its health status, and for its religious, cultural, and social significance. International and national global public health policies exist on a grand scale in an effort to push and reclaim breastfeeding as the normal way to feed all infants. The question is not about the worth of breast milk or breastfeeding, but instead on how these can be implemented to improve the health and wellbeing of mothers and infants. There are multiple reasons and factors for low rates of breastfeeding and exclusive breastfeeding. In high-income countries, delayed lactogenesis and the perception of no milk dominate. Breastfeeding practices are variable, and inequalities exist between ages and social economic groups of women, however these are situation-specific and contextual.

### 3. THEORETICAL FRAMEWORK

---

[(habitus) (capital)] + field = practices (Grenfell, 2008, p. 51)

---

Breastfeeding is a complex social practice and, as Blum (2000a) suggests, “points to more than one set of practices” (Blum, 2000a, p. 3). The previous chapter shows how the way and what women/families and communities have fed their newborns and children has varied across time and place. Interpreting these practices from multiple views—including public health lenses—offers greater insight. In this chapter, Foucault’s concepts of discourse and power, and feminist sociology writings on breastfeeding are reviewed for the perspective they offer to this topic. However, the theoretical framework used in this thesis is Bourdieu’s theory of practice, which consists of the pliable notions of *habitus*, *field* and *capital*. They are supple because Bourdieu insisted that they be used as tools to see the unseeable. *Habitus* is the conscious and unconscious characteristics that travel with the agent and direct “what we do”. *Field* is the social arena in which the individual or group adapts and manoeuvres, using his/her resources (*capital*). Each is outlined in relevance to breastfeeding.

This thesis spans sociology and public health. It is commonplace for public health researchers to conduct research that investigates health-related behaviours (such as breastfeeding). However, in the context of public health, these behaviours are often viewed in isolation, and there has been an over-emphasis placed on the issue of health-related knowledge. A sociological approach acknowledges that health-related behaviours do not occur in isolation (Popay & Williams, 1996; Williams, 1995). It also recognises that the relationship between health-related knowledge and action is problematic (Williams, 1995). For example, sociologist Hilary Graham conducted research into mothers who continue to smoke during their pregnancies. Graham (2009) found that women in her study were aware that maternal smoking posed a health risk to their children, however they smoked despite this knowledge. Graham concluded that these women used smoking to help them “cope” in their complex social circumstances (Graham, 2009).

Williams (1995) suggests that we cannot explain health-related behaviours in terms of beliefs, actions, or consequences, but must instead concentrate on the meanings placed upon the behaviour in the context of people's daily lives (Williams, 1995). Through this approach, and understanding the interconnectedness between mothers' day-to-day lives and their complex social and cultural circumstances and health-related practices, we may gain some new insight into early cessation. Theorising women's experiences and the role played by social structures is central to understanding the current low rates of exclusive breastfeeding and processes of early cessation. Various approaches (Foucault, feminism, and to a greater extent Bourdieu) will provide a different lens to look through, and help to explore the patterns of exclusive breastfeeding and the mothers' experiences and "meaning-making" related to cessation.

### **Foucault and risk**

The French sociologist Michel Foucault (1926–1984) sees health and medicine as systems of social control, that define and assign categories through knowledge (discourse) and power (Bunton & Petersen, 2002, pp. 3–10). Health discourse, and power reveal how expert-driven biomedical models (i.e. a model of health and illness, classifications of types of breastfeeding) limit the maternal lactating body and breastfeeding. Individualisation is where the agent (mother) is held responsible for the risks and consequences in daily life (how the child is fed), and ignores the contribution of social, environmental, and political factors. (Beck, 1992). In this way, the individual can be monitored through diseases or health-constructed categories (Bunton & Petersen, 2002, pp. 16, 30), such as types of breastfeeding: "exclusive", "any", "partial" or "formula feeding".

From a contemporary biomedical view, mother's and childrens' bodies are associated with risk, in need of, control and management (Malacrida & Low, 2008b, p. 149) Giddens (1993) describes modern Western societies as "risk cultures" where the individual is constantly assessing and making choices based on the level of risk. (Giddens, 1993) Contradictory health expert and lay knowledge confounds choices, making it stressful for the mother to know what or how to feed her baby. For the most part, the "power" exerted over the individual means that women and men comply with the social, biological, and expected norm (White, 2013, p. 9) Douglas (2003) argues

that categorical systems are socially constructed, that the definitions of illnesses and diseases exist to distinguish between pure and dirty, safe and unsafe. Anything that falls outside of the constituted category is a “cultural anomaly” that must be controlled to minimise risk (Douglas, 2003).

In Foucault’s view “power” is not direct (on the individual) but systemised. As a structure it is enacted as “bio power”—the form of power and knowledge specific to time which acts as a system of general power relations, such as the medicalisation and individualisation of the sick, insane, unfinished maternal body. In this way those in positions of power can administer surveillance and control over the body (McHoul & Grace, 2015, p. 7). Foucault suggests that “it is the way our current practice (what we do) works so as to bring about an order in which the men and or women will be healthy, secure and productive” (Foucault, 1980; Taylor, 1986). For example, the “medicalisation and individualisation of a women’s sexuality” means that her biological changeable, unpredictable, reproductive body is seen as needing a unique definition (discourse) discrete from the male body because it represents a greater risk (McHoul & Grace, 2015, p. 82). These forms of knowledge (discourse) allowed for greater surveillance and control of the population, through the collection and organisation of information (Couzens Hoy, 1986, p. 117). Foucault says “their supervision was effected through an entire series of interventions and regulatory controls: a biopolitics of the population”. He argues that the medicalisation and scientific understanding of something like breastfeeding and the maternal body is historically and politically specific (Foucault, 1980). The development of modern social and medical sciences is the development of sophisticated power-knowledge of social control. (Foucault, 1980, p. 130) Scientifically-based knowledge is legitimised through professional groups (such as lactation consultants, the Australian Breastfeeding Association, obstetricians, paediatricians) and internalised by women as truth; for example, that breastfeeding is healthy and best (White, 2013, p. 123). This allows for scientific criteria to categorise children and women as healthy, deviant, criminal, or sick (Foucault, 1980) Thus, power and knowledge (discourse) shapes and forms the maternal and child body, and those whose bodies are being shaped in turn react to the power-knowledge: women and their bodies are therefore both subject and object (White, 2013, p. 129).



**Feminist and sociological writing about breastfeeding**

It is important to acknowledge the contribution of feminist theory to the understanding of mothers' breastfeeding practices. From a feminist perspective, breastfeeding and the physical use of breasts to nurture, is positioned in the context of good and bad mothering, thus locating it with morality, guilt, ethics, and power (Malacrida & Low, 2008a; Shaw, 2004). Sheehan, Watt, Krueger, and Sword (2006) show that mothers equate breastfeeding with good mothering and worry that it would be risky for the baby to choose any other method (Sheehan, Watt, Krueger, & Sword, 2006). Similarly, Murray (2002) reported that mothers within the United Kingdom refer to the use of formula as "dangerous" to the health of the baby (Murray, 2002). These reports help to reveal the ambiguity of the biomedical and public health discourse and potential harm that they may inflict on women. Bottle feeding mothers from socially advantaged backgrounds were found to be better able to resist the social pressure and guilt, and decide against breastfeeding (Blum, 1993). Carter (1995) analysed women's experiences over several generations, noting that for many women from the 1920s onwards breastfeeding was associated with poverty, exhaustion, discomfort, and embarrassment, and for some women bottle-feeding offered a "way out" and respite from the demands of mothering (Carter, 1995).

Blum (1993) argues that the act of breastfeeding is often romanticised (Blum, 1993). Many western women find breastfeeding difficult, suffer anxiety, and face moral dilemmas if and when they decide not to breastfeed at all, or to stop (Avishai, 2011; Burns et al., 2010; McInnes & Chambers, 2008; McInnes, Love, & Stone, 2000; Ryan, Bissell, & Alexander, 2009). The question here is why do so many women across all social groups find breastfeeding—particularly exclusive breastfeeding—so difficult in today's climate? Shaw (2004) insists that to breastfeed is not a naturally occurring instinct but an activity; it is "work that women do" that actually requires practice in order to succeed. Shaw (2004) calls for policymakers, lay organisations, economists, ethicists, and feminists to acknowledge that the breastfeeding body is a labouring body, and thus makes a vital contribution to the social wellbeing of the population as a whole (Shaw, 2004).

Blum (1993) also sees the bodily practice of breastfeeding as empowering for mothers, as it is a unique experience of the female body and offers intense engagement with the

child. Essentialist feminist writers from the 1970s refer to this as the “celebrating of biological talents”, where childbirth and mothering is recognised as a capacity for women to gain social and political equity (Shilling, 2003b). A study using a sample of 300 breastfeeding mothers found that mothers engaged in either a breastfeeding process (to continue) or a de-breastfeeding process (to stop) (Guillermo et al., 2010). These findings are comparable to other studies that have found that women may choose to breastfeed and understand that “breast was best”, but do not continue breastfeeding after the first 8 weeks postpartum (Schmied & Lupton, 2001; Spencer, 2008; Zimmerman & Guttman, 2001).

How women choose to feed their children or to use their physical capital (Bourdieu, 1984), has become the target of the new health risk management strategies (Giddens, 1993; Petersen & Lupton, 2000; Shilling, 2003a). This leads to Bourdieu’s theory of practice (habitus, field, and capital) and his concept of physical capital (the bodily resources mothers may use to negotiate breastfeeding and the use of their lactating bodies).

### **Pierre Bourdieu: theory of practice**

Bourdieu’s concepts of habitus, field, and capital will provide a “thinking toolbox” to analyse and explore the relationships between mothers’ choices and practices, culture, and social structure (Grenfell, 2008; Shilling, 2003a; Web, Schirato, & Danaher, 2002). This triad of concepts has been used throughout education, health, and arts to assist in understanding what agents do and the choices they make without being descriptive and causing blame on the individual (Bourdieu, 1990b; Collyer, Willis, Franklin, Harley, & Short, 2015; Williams, 1995).

Pierre Bourdieu is regarded as one of the leading French intellectuals of the 20th century (Grenfell, 2008; Jenkins, 2002). His prolific body of work spanned over 50 years and engaged with a wide cross-section of disciplines and issues including anthropology, sociology, philosophy, politics, art, health, education, globalisation, poverty, and social research. Bourdieu insisted on the use of theory and research together to understand the social world, stating that “theory without empirical research is empty, empirical research without theory is blind” (Bourdieu, 1977; Jenkins, 2002, p. 10).

From this approach, Bourdieu developed his “theory of practice”, as an attempt to reconcile the tensions between subjectivism and objectivism; more simply, to the tensions between the individual and the social and political world (Bourdieu, 1977). Central to Bourdieu’s theory is the argument that “practice”—what we do and the ways of doing things including values, actions, beliefs—is often without clear cognitive intent, because it is performed unintentionally and routinely. Practices are neither wholly conscious or random but represent a “practical logic”, enabling the agent to fit into the field (Bourdieu, 1990b). This enables groups or individual agents (i.e. mothers) to make choices about how and what she may feed her child or family without always being consciously aware of the normative rules, regulations, and expectations.

Bourdieu refers to this as the “doxa” or “doxic experience”, a set of shared beliefs and knowledge shaped by experience closely linked to habitus and field (Grenfell, 2008; Jenkins, 2002). The mutual reciprocal relationship between the habitus and field fortifies the prevailing dominant power of the doxa and, according to Bourdieu and Wacquant (1992), underpins the symbolic power (Bourdieu & Wacquant, 1992, pp. 66–74). With regard to infant feeding, the taken-for-granted assumptions that “breast is best”, and how mothers should feed their children in the western world, can be understood as some of the prevailing doxic views, a social norm of motherhood, and a gender-based food practice (Lupton, 1996, pp. 38–42). These shared beliefs are linked to the “primal state of innocence” (Bourdieu, 2000), and taken for granted because of a lack of available discourse to explain them (Grenfell, 2008, pp 120–122). Consequently, what we do (practices) are conceptualised as visible, objective, social phenomena that are located and understood within space and in time (Bourdieu, 1990b). These doxic practices are central to the concept of habitus, field and capital, and include the unconscious practices and routines that make up every day experiences (Grenfell, 2008). Habitus (one’s tastes, dispositions, characteristics) and capital (one’s physical, economic, educational/intellectual resources/positions) are thus independent, but at the same time grouped together to add to and reproduce the individual’s social world (field), collectively giving rise to one’s practice (Grenfell, 2008).

Bourdieu's theory has often been misinterpreted as mechanistic and deterministic (King, 2000; Throop & Murphy, 2002), viewed as objective structures that produce culture, which determines practice, which reproduces those objective structures (Jenkins, 1982). However Jenkins (1982) and others point out that the very nature of the embodied habitus (and its traits) acquired through experience and co-dependent on the social field means that what we do is subject to change, and to the agent's own choosing (Jenkins, 1982; Swartz, 2003), making this triad of concepts durable and co-dependent and interconnected. In fact, Bourdieu challenges determinism in that his theory brings together the subjective and objective where neither are dominating or causal (Jenkins, 2002, p. 83). Thus, an individual's behaviour is not rule-governed, but instead reflects the tensions between habitus, field and capital (Costa, 2006).

### *Habitus*

*Habitus* is a complex concept to define and understand. The term originates from Latin, meaning dispositions, general physical state, or typical condition (Jenkins, 2002, p. 74). Bourdieu describes it as the locus where "all my thinking started from this point; how can behaviour be regulated without being the product of obedience?" (Bourdieu, 1990b, p. 65). It is the lens through which Bourdieu sees the social world (Grenfell, 2008, p. 61). The concept has since been used in many disciplines to gain a deeper understanding of social worlds and the actions within them (Grenfell, 2008). Habitus can be described as the "subjective element of practice"; what individuals do in their daily lives, their ways of feeling, thinking, and acting in the social world (Grenfell, 2008, p. 47). For Bourdieu, these elements do not act independently of each other but have evolved and are acquired mostly unconsciously from individuals past and present, family upbringing, and educational experiences (Grenfell, 2008; Jenkins, 2002). Habitus therefore provides a means to disentangle and examine the underlying structures of women's practices and experiences within their social worlds of early cessation of exclusive breastfeeding in those early months following birth.

An integral part of habitus is Bourdieu's concept of bodily "hexis" defined as the personal embodiment. To Bourdieu, the embodiment of habitus means that one's personal dispositions (for example ways of walking, standing, eating habits, manners etc.) are learned and acquired from history and reflect an individual's culture and social structure. These dispositions are inscribed onto the body to produce the "taken-

for-granted” ways of feeling and thinking, the ways of looking, body shape, food preferences and similar factors. (Jenkins, 2002, p. 76). The embodiment of habitus as a set of underlying principles is particularly relevant in understanding the social value of and where food tastes come from (Bourdieu, 1984, p. xix), and normative values surrounding the maternal body (Lupton, 1996). The concept has recently been used to interpret discourse around the public health issue of obesity and the body (Warin, Turner, Moore, & Davies, 2008). It is through our bodies—what we use them for, what and how we feed, maintain, clothe them—that reveals the deepest social, cultural, and personal dispositions of the habitus (Bourdieu, 1984). This means that the habitus (and its many dispositions) generates and reproduces practices that are often “in sync” (have a relationship with) the social conditions of that which it produces (Bourdieu, 1990b, p. 78). These social conditions are held and mutually reinforced within the social field.

### ***Field***

*Habitus* and *field* are closely aligned, and co-constructed with *capital*. Bourdieu’s theory emphasises that one cannot exist without the other, and that each are integral in making sense of the social world (Bourdieu, 1990b). Bourdieu suggests that in order to understand a particular phenomenon—such as smoking, or the use of infant formula milk—the social space in which this practice takes place must be identified and explored. This social space or arena is the field.

The field is defined as the “conjectural site” (social arena) in which structural proprieties are embedded in everyday life” (Robbins, 2000a). Bourdieu uses the analogy of a game (a site of struggle) with the habitus (embodied dispositions such as naturalness, beauty, maternal instinct, gender identity) and capital (the resources that the players bring to the game) (Grenfell, 2008). This social arena is where players (i.e. mothers) use multiple types of capital to negotiate the rules in order to advance themselves socially, generating distinction and symbolic capital such as elevated social status (Bourdieu, 1996). There are multiple fields i.e. law, education, science, health/ biomedical, family, parenthood, and an individual’s personal social environment (Bourdieu, 1990b; Grenfell, 2008; Grenfell & James, 2004). Atkinson (2014) refers to the family as a field and area of struggle, with its own set of rules, language, assumed knowledge, and conditions (Atkinson, 2014). Bourdieu (1996)

sees the family as a social space, it is a “circulating category” with implicit expectations that socialise the agent, essential in the maintenance of social order and transmission of capital (Bourdieu, 1996).

In the context of infant feeding, motherhood can also be viewed as a space that women enter through pregnancy, birth, and gender (Atkinson, 2014). Lupton suggests that in the context of family, food, and feeding, the meaning and norms around motherhood are important to consider in any analysis (Lupton, 1996, p. 39). Bourdieu’s theory is helpful in drawing attention to different forms of capital used within the social arena of motherhood. Bourdieu’s perspective incorporates the taken-for-granted mother and female-specific doxa of motherhood identified in other disciplines. Motherhood includes the accepted social and cultural norms of women’s roles in food preparation, foraging preparation, and feeding—this is seen as woman’s work (Murcott, 1993). Similarly, Power (1999) sees the field of single working class mothers as a structured space organised around types of capital (the body, money, social connections) where agents have dominant or subordinate positions (Power, 1999). Fields are not static spaces, but are in continual momentum generating change over time in conjunction with the players and the capital they bring to the field.

The notion of a field describes the inner and outer social space that the individual or agent (institution) occupies within the habitus (Bourdieu, 1990b). Bourdieu argues that in order to understand how individuals and other social agents or institutions interact—or a social phenomenon or event—it is necessary to analyse the social space (field) and the actor or player positions within and surrounding the social space (Grenfell, 2008). This means that we need to locate the phenomena of cessation of exclusive breastfeeding in its specific historical and local/national/international context. We also need to analyse the ways in which women’s previous knowledge about exclusive breastfeeding has been generated, by whom, and whose interests were served? External forces, such as the “breast is best” public health promotion campaigns and other fields press down on individuals, and the whole social field. Just how this happens and what effect this may have on health behaviours requires further exploration. For example, what happens to women when they move out of their familiar field (social space) into the institutionalised field (hospital) to have their children? Does this cause *hysteresis*—a personal dislocation of the women’s habitus

causing what Jenkins refers to as “a fish out of water”, resulting in a subjective and objective personal crisis? (Jenkins, 2002, p. 69). Is this the reason why women say they will breastfeed and then cease when they leave that social field and return to their own field? This would suggest that women are modifying their habitus by using their physical capital (breastfeeding or breast milk feeding) to fit into the new social field.

***Capital: Physical capital***

The definition of *capital* that Bourdieu uses is broad and falls into three principal types: economic (money, mercantile exchange), social (kin, family, social groups) and cultural (education, consumption patterns, tastes, embodied traits) (Bourdieu, 1990b, pp. 53–57; Robbins, 2000a, pp. 75–82). The value and exchange potential of capital is related to the habitus and field. Capital can be embodied as forms of history, and acquired over time as forms of cultural and physical skills. (Robbins, 2000a, pp. 82–87). Bourdieu’s views the body as a type of “physical capital” that is both biological and social. Capital exists as a resource, mobilised and translated into other forms and sub-types of capital. The newly translated capital brings benefit to the agent in the form of elevated social status or power within a given field. How the capital is used is dependent on its value within the field. For example, in his work *Distinction*, Bourdieu demonstrates that tastes in food are relative to social class. Bourdieu uses taste and distinction as a way of explaining how the physical body is given status according to what we do and how we look. For example food-tastes such as breastfeeding are “class markers” and have the power to generate symbolic power in the form of elevated social status (Bourdieu, 1984). This is symbolic capital and is the highest form of capital as it legitimises a practice or particular taste associated with class (Robbins, 2000a).

In respect of breastfeeding, it may be assumed that exclusive breastfeeding is an elite social taste of the well-educated socially-connected mother because of its ability to reproduce health and distinction as a good mother and, thus, symbolic capital. An area of interest in relation to infant feeding is how the physical act of exclusive breastfeeding and ceasing affect the social value of the bodies of the mother and child? Shilling (2003) notes that different social classes place distinctly different values on bodily practices and performance. These are important because they give individuals a sense of self. Indeed, Shilling argues that people with more capital (intelligence,

economic, social) have more agency and control over their destiny and choices (Shilling, 2003a, 2003c).

Several researchers, including Bourdieu, have examined the relationship and between social class and food choices (Bourdieu, 1984; Germov & Williams, 2004). According to Bourdieu, bodies bear the imprint of social class, reproduced by social location, habitus, and tastes. Taste (voluntary choices, preferences) are deeply embodied, and give distinction or no distinction to the bodily practice. Shilling (2003, p. 114) describes working class mothers sacrificing their bodily needs (rest, recreation, and food) in order to meet the needs of their children and households and husbands (Shilling, 2003a). In this case, it is the lack of economic capital that separates the working class mother from using her own physical resources.

Bourdieu's theory of practice and concept of distinction have been used to look at a range of other health-related issues (Ford & Dzewaltowski, 2011; Grosse Frie & Janssen, 2009; Power, 2005) surrounding nutrition and lifestyle-related diseases (Warin et al., 2008; Williams, 1995). Bourdieu himself argues that food and eating is more than a process of nourishment—it is an elaborate performance of gender, social class, and individual identity. The use of food and eating (breastfeeding or infant formula) are not just methods of bodily nourishment, but forms of “physical capital” (Bourdieu, 1984; Warin et al., 2008). How women choose to feed their children (to use their physical capital), and for how long, is thus a complex interplay between their own dispositions and social world and how that social world views the mothers' breasts and body at that time; “the body is the most indisputable materialisations of class taste, which manifests in several ways” (Bourdieu, 1984, p. 188). Thus, bodies and what they are used for are shaped by the social and cultural field (Bourdieu, 1984; Warin et al., 2008).

To place breastfeeding and the practice of exclusive breastfeeding in a social context would mean recognising that breastfeeding has a greater meaning than the act of feeding a baby associated only with the biological cycle of reproduction. The practice of exclusive breastfeeding could also be viewed as a conscious action or “social game” where the mother and her child engage and manage within that time and space. (Grenfell, 2008). This does not completely fit with Bourdieu's argument that practice



largely occurs outside of the individual's conscious control. Health promotion campaigns frame exclusive breastfeeding as a set of categorical rules, especially in how it is done and for how long. Providing a prescriptive mechanical method for what is essentially—from a Bourdieuan perspective—a socially-constructed highly interactive embodied practice. (Bourdieu, 1984) One could hypothesise that based on Bourdieu's theory of practice, the phenomenon of early cessation of exclusive breastfeeding and high rates of formula use are a result of prescriptive rules, which are at odds with what is and essentially needs to be an improvised embodied practice. This would suggest that the practice of breastfeeding is highly variable, subject to the conditions in which it was formed (*habitus*) and in which it is reproduced, the field. (Bourdieu, 1990b)

As mentioned earlier, Bourdieu's concept of hysteresis tackles the tension and dislocation between the taken-for-granted subjective and objective structures, between *habitus* and field. He states that “the *habitus*, as a product of social conditionings, and thus of a history, unlike character is endlessly transformed” (Bourdieu, 1990a, p. 7). He suggests that change is often not theorised because it is pre-supposed (Grenfell, 2008, p. 132). For Bourdieu, the agents' history is ongoing, as is the continuous accumulation of dispositions (the *habitus*), field, and capital which form the *habitus*. This helps to illustrate that individuals (mothers) continually transform embodied historical dispositions (capital and *habitus*), and are thus in a state of continual change and highly dependent on the structure of the field. Because this reciprocal change process happens over time, the *habitus* and field are usually in sync. However, in times of personal, social, or cultural crisis, where the *habitus* (and its multiple dispositions) are faced with abrupt field position changes (i.e. need to use formula) hysteresis occurs (Grenfell, 2008, pp. 131–141). This concept highlights the way that disjuncture between *habitus* (individual) and field (society) may occur and the impact this has on the individual (mother).

Bourdieu did not intend for his theory to be used as a “paint by numbers” approach (Jenkins, 2002, p. 61). The versatility of his theory has allowed the concepts to be employed by many disciplines (either individually or collectively) to try to make sense of everyday life, and to explore the dichotomies between micro/macro, maternal/symbolic, empirical/theoretical, objective/ subjective, public/private, and

structure/agency. Bourdieu's sociological approach helps to "tap into the "alternative truths" surrounding youth risk taking behaviours and the use of alcohol as a social taste and tool that supports group conformity" (Lunnay, 2011). Others have employed the concepts individually to explore the healthcare field, and also the body as a form of physical capital exchanged and managed in the field of sport and athletic performance (Shilling, 2003).

### Conclusion

Bourdieu's point is that within an individual's day-to-day social world, much of what we do, believe, and value is done without knowing and thus taken for granted. This in turn enables social worlds to function fluidly, as individual practices are not constrained by sets of prescriptive rules (Grenfell, 2008). This has implications for research and health promotion, as asking participants to explain or give for reasons "why" they do or do not smoke, breastfeed, or take their medication may only invite the *expected* response. Bourdieu argues that the participant (mother) cannot give an account for their actions and will thus only "justify" what is expected and should happen, or what they should do, because of the constraints of the social field they have been placed in. Essentially this occurs because they do not know "why" they do what they do. It is this perplexing practice that holds the most meaning (Bourdieu, 1977; Williams, 1995). Given the widespread acknowledgment by women and society in general that breast is best, Bourdieu's argument has important implications for social research involving embodied practices such as breastfeeding.

In adopting this approach, I will need to consider how to see what is unknown and impossible to explain but acted out in individual daily lives and within social worlds. That is, why do women across the social and age spectrum engage in exclusive breastfeeding and stop before they are ready or intend to? Williams (1995) argues that Bourdieu's key theoretical framework, the logic of practice involving *habitus*, *capital* and *field* can be used to explore and explain the woolly interplay between the unspoken aspects of daily life, including class and lifestyles, and their impact on health, especially when trying to understand the disparities between class and health behaviours (Williams, 1995, p. 581). Thus the "causes of causes" are all interrelated (Hunter et al., 2011; Marmot, 2006). It is not a question of causation, but rather a collective concept where each one presses upon the other in order to produce the

event, phenomena, or “practice”. I anticipate that a Bourdieuan theoretical view will help to understand the hidden realities beneath the low rates of exclusive breastfeeding and the struggles for women as they set out to breastfeed. I am particularly interested in the impact of habitus and how mothers use their bodily capital and the social arena (field) in which they feed their children.

#### 4. METHODS: MIXED METHODS APPROACH

---

To produce a whole through integration that is greater than the sum of the individual qualitative and quantitative parts:

$$1 + 1 = 3$$

(Fetters & Freshwater, 2015).

---

The preceding chapters established that there are many aspects of the early cessation of exclusive breastfeeding that lack empirical evidence and thus require further investigation in this thesis. These include prevalence rates, identifying the factors associated with early cessation, and exploring how mothers experience and “make sense” of early cessation. Thus the research questions addressed in the thesis are:

##### *Quantitative research*

- What are the national prevalence rates of premature cessation of exclusive breastfeeding from birth up to the first 6 months?
- What factors are associated with premature cessation of exclusive breastfeeding in the first 6 months?

##### *Qualitative research*

- What are Tasmanian mothers’ experiences of breastfeeding?
- How are Tasmanian mothers making sense of (what does it mean to them) cessation of exclusive breastfeeding?

This chapter describes the mixed method approach used to address these questions.

#### **Research Design**

In summary, this project utilised a mixed methods research design that encompassed two linked studies. The first study addressed the first two research questions using a quantitative secondary analysis of questionnaire data. The second study (referred to as the Tasmanian Infant Feeding Study) addressed the final two research questions using

qualitative and quantitative data from short demographic questionnaires and 22 focus groups (FG), involving 108 Tasmanian mother-child pairs.

Mixed methods is a methodological approach involving the use of and incorporation of statistical data and theoretical analysis of qualitative data (Teddlie & Tashakkori, 2009). It adds value by discovering new ways of thinking about a multidisciplinary problem, and offers researchers the opportunity to select the “most appropriate techniques from the quantitative and quantitative methods to more thoroughly investigate the phenomenon of interest” (Tashakkori & Teddlie, 2010, pp. 9–10). A mixed methods approach is well suited to investigating a complex phenomenon such as breastfeeding practices. One of the benefits of using mixed methods is that it allows researchers from all paradigmatic traditions to use both quantitative and qualitative analysis depending on their research questions (Tashakkori & Teddlie, 2010). This thesis does not follow a specific paradigmatic tradition. The purpose and focus of the thesis is on:

1. Centrality of the research – the research problem and answering the research question to determine the method employed.
2. Integrating the findings of quantitative and qualitative components in a mutually-illuminating manner so that in the write-up the data can talk to each other. (Bryman, 2007)
3. Convergent, offering new insights across disciplines.

Mixed methods have been heavily used within public health research fields. It is common practice to rely on one of the methods (e.g. qualitative) to provide deeper insights into the specific phenomenon (Teddlie & Tashakkori, 2009, p. 595). However, Fetters and Freshwater (2015) have urged researchers to instead focus on an “integration challenge” model, expressed in the quote which introduced this chapter. It means that quantitative plus qualitative equal more than the simple sum of the individual components (Fetters & Freshwater, 2015). Conceptually, the integration of both methods at write-up supports the use of Bourdieu’s theory, summarised in the equation:

$$[(habitus) (capital)] + field = practices \text{ (Grenfell, 2008, pp. 51–52).}$$

Integration can occur at any stage of the research process (Bryman, 2006). Merging the data in the write-up expands and adds value to the quantitative and qualitative data, offering new insights across disciplines (Fetters & Freshwater, 2015). In this thesis, questionnaire and FG study data strands were collected using different methods and then analysed in a sequential semi-concurrent manner in two phases: quantitative, followed by qualitative. The quantitative analysis was used to inform and sensitise the qualitative data analysis (Bryman, 2006). Thus, some degree of integration began at the data analysis stage and continued during interpretation and write-up. Data findings from both phases were used to confirm and provide meaningful inferences (Fetters & Freshwater, 2015). Results from the quantitative and the qualitative arms of the research are discussed together in the final thesis chapter.

### **Ethics**

Each of the two linked studies had independent ethics approval. Ethics approval for the ANIFS survey was obtained by and through the Australian Institute of Health and Welfare's Ethics Committee (AIHW, 2011a). Approval to access the AIHW ANIFS restricted database was achieved in 2013 (Appendix 4, copy of the Australian Data Achieve (ADA) approval notification).

Ethics approval was obtained from the Tasmanian Social Science Ethics Committee in 2011 to conduct the Tasmanian state-based FGs, and gather questionnaire data on the mother-child demographic characteristics (Ethics Ref No: H0011838. Project title: Investigating the child feeding experiences, attitudes and knowledge of Tasmanian mothers with children aged from 0-36 months. Appendix 5).

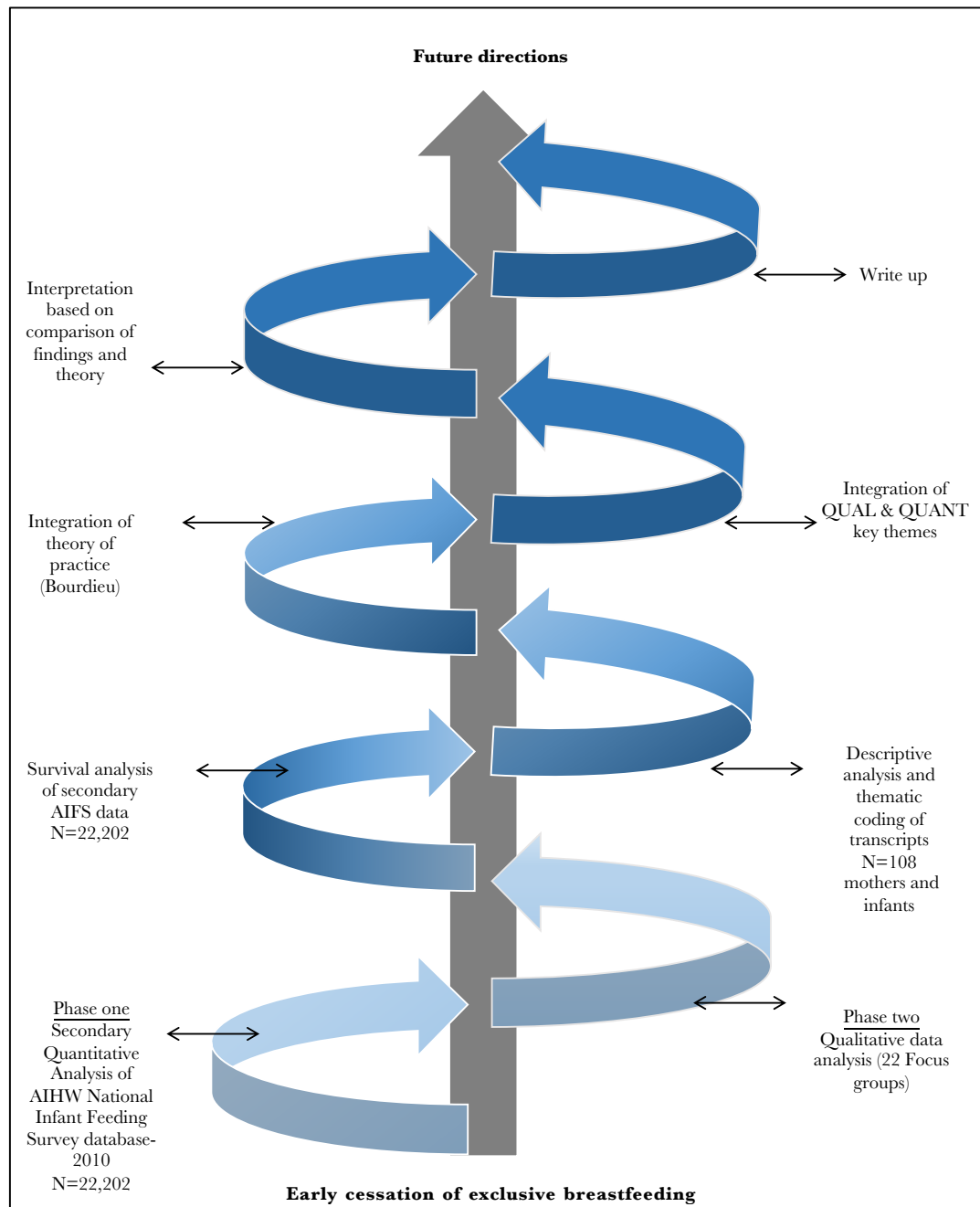


Figure 3. Concurrent sequential mixed methods design study.

### **Phase One: Quantitative Data**

The following section outlines the approach used to undertake Phase 1 of this study: the secondary analysis of the Australian Institute of Health and Welfare (AIHW) Australian National Infant Feeding (ANIFS) cross-sectional survey of 2010. The research questions and objective sought to:

1. Describe the national prevalence rates of premature cessation of exclusive breastfeeding from birth up to six months of age
2. Identify what factors are associated with premature cessation of exclusive breastfeeding?

Survival analysis method, namely a stratified Cox proportional hazard model, was used to compare the survival experience and hazard of interrupting exclusive breastfeeding of children whose first feed at birth was breast milk (colostrum or directly from the breast), adjusting for possible confounding interaction effects of known covariates. Hazard ratios and 95% confidence intervals from the Cox proportional hazard regression models were used to estimate risk of stopping exclusive breastfeeding, thus identifying mother and child factors associated with the cessation of exclusive breastfeeding.

The 2010 ANIFS was the first state and territory cross-sectional survey conducted to collect child feeding practices in a manner consistent with the standard WHO definitions and indicators (WHO–UNICEF, 2008). The response rate was 56% and the data were weighted to adjust for differential non-response (reported elsewhere, (AIHW, 2011a).

The AIHW ANIFS is briefly described first followed by statistical methods used to analyse the data.

### **The Australian Institute of Health and Welfare National Infant Feeding Survey**

After approval to access and use the ANIFS was granted from the Australian Data Archive in May 2013, the ADA survey, consisting of  $n = 283$  variables, were uploaded from the ADA server directly to the secure and password-locked MRIT server as per ADA instructions. The database was then imported to the statistical



package (Stata, v. 12) for analysis.

### **Study design and sample**

Secondary data from ANIFS was used. This cross-sectional survey of infant feeding practices of children aged 0–24 months was collected from October 1, 2011 to February 1, 2011. A sample of 52,008 children aged between 0–24 months were randomly selected from the Medicare Australian enrolment database. The self-completed survey questionnaire gathered socio-demographic mother and child characteristics and feeding practices, and was mailed to participants who were first approached by an introductory letter. Data collection modes were via post and or web-based. The overall response rate was 56%; this varied by age of child and state or territory, and yielded a sample of 28,759 completed survey forms. The Tasmanian sample consisted of 680 (2.4%) respondents. The ANIFS full survey (0–24 months) and questionnaire are reported elsewhere (AIHW, 2011a, 2011b).

### ***Participants***

Only children aged between 0–24 months were included in the ANIFS survey, and children from external territories were excluded. Infants aged 0–6 months were over-sampled in the ANIFS to obtain sound estimates of breastfeeding intensity and duration for this age period. The infant was the unit of measure in the ANIFS. The survey also asked questions pertaining to mother characteristics and infant feeding practices and attitudes. The NIFS dataset was made up of the following variable information categories: general, child, feeding, mother, and ADA-derived variables.

### ***Exclusive breastfeeding study ANIFS sub-sample***

For the secondary analysis, only infants aged between 0–6 completed months, who had commenced exclusive breastfeeding at or around the time of birth were included for analysis. Figure 4, shows the derivation of the sample 22,202 from the ANIFS.

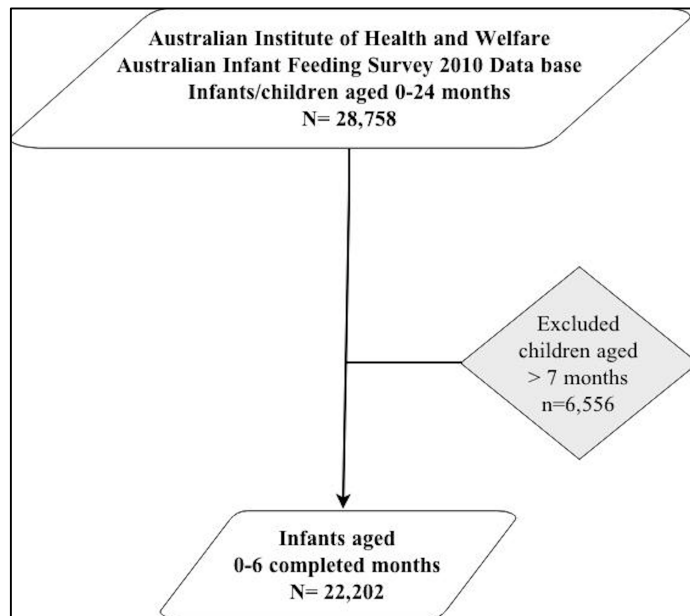


Figure 4. Derivation of the sample 22,202 from the Australian Institute of Health and Welfare (AIHW) 2010 Australian National Infant Feeding Survey (ANIFS)

### Data handling

Of the 28,758 cases and 283 variables, a total of 6,556 cases were removed as they were aged above 6 months (7–24 months) and were outside of the scope of this PhD research project. The flow chart (Figure 4) outlines the approach used to reduce the data and remove data anomalies.

The remaining 22,202 cases were first analysed using descriptive techniques to identify anomalies or outliers. Proportions and frequency tables were generated for each potential biological or social interaction variable of interest identified in previous research. Distributions were assessed visually using histograms and Q-Q plots. Categorical variables were factorised for the analysis. the outcome (indicator variable) was “age event” (Kleinbaum & Klein, 2005).

### Missing data

Missing data are defined as values that are not available and would be meaningful for the analysis if they were observed (Little & Rubin, 1989) Before any analysis took place, the ANIFS database was systemically checked for outliers, inconsistencies, and missing data, including value labels, out-of-range values, biologically-implausible values and wild codes, and logical inconsistencies. Data were complete for the

“infants age” variable (0–6 completed months) and the “age of event” variable, which was generated using current age and when the baby was fed infant formula and/or other food or fluids.

There is no universally-agreed method for handling missing covariate data (Little et al., 2012). Multiple imputation using chained regression equations was used to manage missing covariate data, ranging from 1% to 30%. The imputation models included all 18 covariates, including the survival time and event status. (Hosmer, May, & Lemeshow, 2008). The estimates were combined using Rubin’s rules (Little & Rubin, 2014). We then fitted the Cox proportional hazards (PH) model to the imputed data (Little & Rubin, 2014).

### *Study variables*

The ANIFS database consisted of predominantly fixed categorical or binary demographic and infant -feeding variables. These were pre-defined by the survey questions and had fixed values, categorically pre-labelled and defined by the ADA.

Variables of interest were potential predictors (Horta, Kramer, & Platt, 2001; Kramer & Kakuma, 2012; Ladomenou, Kafatos, & Galanakis, 2007; WHO, 1981), and not intervening variables (Peat et al., 2004). These included:

- Maternal age (years)
- Highest educational standard attained
- Index of Relative Socio-economic Advantage and Disadvantage (IRSAD) Socioeconomic indicators for areas (SEIFA) quintiles 1-5 (quintile 1 representing the most-disadvantaged area and quintile 5 the least-disadvantaged) (Pink, 2011a)
- Parity (number of live or still born births > 24 weeks gestation)
- Smoking status
- Current body mass index (BMI kg/m<sup>2</sup>, underweight < 18.5, normal 18.5–<25, overweight 25–<30, obese ≥30) (AIHW, 2011b; Australian Bureau of Statistics, 2012)
- Perinatal depression (PND), (defined as a range of mood disorders affecting a woman during pregnancy and after the birth of her child) including prenatal

depression, “baby blues”, postpartum depression, and postpartum psychosis; (AIHW, 2012a),

- Currently on or had taken employment leave (yes/no)
- Currently living with spouse or partner (yes/no)
- Partner’s preference for infant feeding method (breast, bottle, no preference)
- Country of birth
- Infant sex
- Birth method
- Skin-to-skin contact after birth where the naked infant is placed on the mothers or fathers naked chest (WHO–UNICEF, 2008)
- Infant receiving expressed breast milk (EBM)
- Regular dummy use
- Infant gestational age (completed weeks), a continuous variable
- Infant birth weight (grams) were recorded a continuous variable

Infant gestational age and birth weight data quality was noted to be poor with multiple gestational age and infant birth weight outliers identified. The ADA was contacted in March 2011 and emailed the list of the identified outliers. A discussion was conducted with the Australian Data Archive data management team and the primary investigator of the NIFS about the possibility of correcting some of the anomalies, namely biologically-implausible values. The ADA made a decision not to correct any of the anomalies in the dataset and advised that these values be made missing.

Each case identified as an outlier—whether biologically-implausible (i.e. gestational age of 95 weeks’ gestation or birth weight of 21 grams) or a possible data entry error—was checked against all other variables for biological plausibility. For those variables upper and lower limits of gestational age ( $< 23.0$  completed weeks gestation,  $> 43.6$  completed weeks of gestation) and birth weights were defined in keeping with World Health Organization ICD 10 and available evidence (WHO, 2010). Descriptive analysis was performed on these variables to identify outliers and anomalies.

These variables were problematic due to the nature and wording of the survey questions, as outlined below. Thus, the variables used in the secondary analysis

provide an estimate and are arbitrary markers of the gestational ages and birth weights. This survey relied on the mothers' or carers' memories and interpretation of the survey questions, namely what is meant by days "late" and "early", thus a response bias is inherent.

The survey questions relating to infant gestational age (question 12) consisted of three separate sub-questions:

- 12.a. How many days early or late was your child born? (Not early or late)
- 12.b. How many days early or late was your child born? (Days early)
- 12.c. How many days early or late was your child born? (Days late)

The ANIFS survey did not define the meaning of "early" or "late". It is common in clinical practice to provide the mother with a "due date", estimated from the date of the mother's last normal menstrual period. Term gestation is defined as > 260 days from the mother's last menstrual period. It is assumed that responses were based on whether the baby was born late or early against mothers' due date in days. The ICD 10 broadly classifies gestational period can span between < 196 days (27 completed weeks) to 294 days (42 completed weeks) or more (WHO, 2010).

These were descriptively analysed separately then combined together to generate two continuous gestational age variables; gestational age days and gestational age weeks. The ICD 10 definitions were used to define the preterm and term gestational age groupings (WHO, 2010). Gestational age of the infant in days was recalculated into weeks using ICD 10 definitions and biological cut-off points of completed weeks of gestation. "Completed weeks of gestation" indicates the number of 7-day intervals that passed since the beginning of the mother's last normal menstrual period. This is a standard, internationally-recommended approach to estimating and measuring gestational age. Both gestational age variables—"gestational age days" and "gestational age weeks" – were dichotomised into two groups, as this is clinically relevant: *preterm* ( $23^{0/7} < 36^{6/7}$  weeks' gestation (259 days after the beginning of the mother's last normal menstrual period) and *term* (equal to or  $> 37^{0/7}$  completed weeks (260–294 days) (WHO, 2010).

Similarly, the infant birth weight survey question consisted of three separate questions (question 4):

What was your child's recorded birth weight? (Grams)

What was your child's recorded birth weight? (Kilograms n.nnn)

What was your child's recorded birth weight? (Pounds and Ounces nn.nn)

These were descriptively analysed separately then combined together to generate one continuous birth weight variable; infant birth weight grams. The range limits for infant birth weight variable were based on the WHO ICD 10 definitions and biological cut-off points and descriptively analysed as a continuous variable and then dichotomised into those born < 2499grams defined as *low* birth weight, and those infants born >2500grams defined as *normal* birth weight as this is clinically relevant (WHO, 2010).

All variables and sub-variables were first analysed descriptively to assess the quality of the data, then frequency tables and distributions and histograms were generated, then all values—including missing cases—were assessed for anomalies and biological implausibility.

### ***Child age parameters***

The “current infants age” variable was supplied by the ADA and expressed in completed monthly intervals (0–1 month, 1–2 months, etc.) as reported by the mother or carer at the time the survey was completed, and was not continuous. The method of defining parameters is reported elsewhere (AIHW, 2011a). For the purposes of this PhD research and time-to-event analysis techniques, the infant age “to” exclusive breastfeeding is used. Exclusive breastfeeding “to” a given month requires that the infant did not experience an “event”—any non-human milk, food, or fluid.

The ANIFS used two concepts for reporting the infant’s age. Figure 5, sourced from the ANIFS, illustrates how infant age was used to measure the “event” of introduction of non-human milk, food or fluids. For example, for the indicator “exclusive breastfeeding”, if the infant received non-human milk (an event) at 1 month of life

(1–<2-month interval), the infant was then said to be exclusively breastfed “to” 1 month of age.

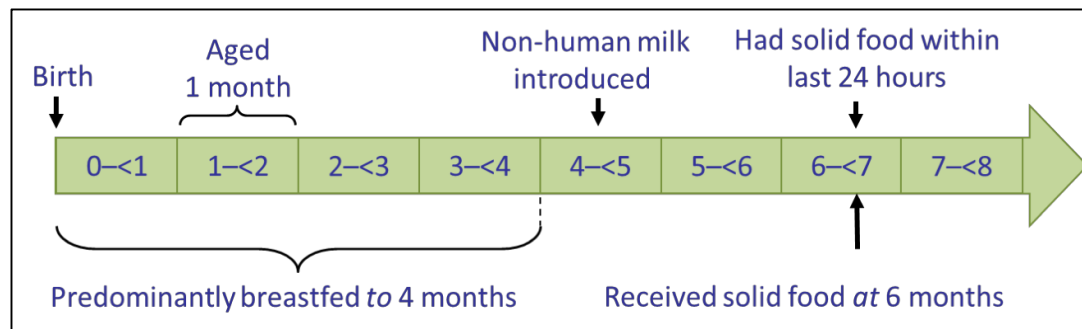


Figure 5. Illustration of different age concepts used in the ANIFS report (AIHW, 2011a).

#### ***Infant feeding indicators, terminology, and definitions***

The AIHW NIFS used the WHO recommended terms and definitions for collecting and reporting breastfeeding practices (AIHW, 2011a). All breastfeeding and infant feeding terms used in this thesis are consistent with the recommended WHO terms and definitions for reporting and measuring infant & child feeding practices (WHO–UNICEF, 2008). See Glossary.

“Initiated exclusive breastfeeding” refers to infants whose first feed was breast-milk (direct from the breast or expressed) (WHO–UNICEF, 2008). Only valid responses were used to calculate the proportion of infants who only had breast-milk for their first feed (missing cases were excluded).

“Exclusive breastfeeding” refers to infants whose first feed was only breast-milk and who had not been fed any other food or fluid with the exception of vitamins, minerals, or oral rehydration salts, and were still being fed either directly at the breast or with expressed breast-milk (AIHW, 2011a; WHO–UNICEF, 2008), during the study period of 0–6 months. If the infant was exclusively breastfed at the time of the survey completion, as per the survival analysis method, they were classified as a “censored case” (Kleinbaum & Klein, 2005).

Cessation of exclusive breastfeeding was the primary outcome variable. An “event” variable “cessation of exclusive breastfeeding” was generated for the purposes of

survival analysis using the existing ANIFS variables: first feed, ever received non-human milk (infant formulas), water, soya, cow's milk, fruit juices, semi-solid and/or solid-foods. We used the ANIFS "current age variable" measuring infant age in monthly intervals (from 0 to 6 completed months) to estimate the age of cessation.

### ***Socioeconomic Status and SEIFA quintiles***

The Australian Bureau of Statistics (ABS) uses its Index of Relative Socio-economic Advantage and Disadvantage (IRSAD), Social Economic Index for Areas (SEIFA) to measure economic advantage and disadvantage in terms of people's access to resources and ability to participate in society in general (Pink, 2011a). The indexes are assigned to areas, not to the individual. The index represents a collective socioeconomic characteristic of the people living within an area of Australia (Pink, 2011a). The data available from the ANIFS and used in this thesis had been categorised into the SEIFA quintile by the ABS, which assigned a postal area (the ABS equivalent of the Australia Post postcode) to the respondents' usual residence. Each postal area was then allocated a relative SEIFA quintile ranging from 1 (most disadvantaged area) to 5 (least disadvantaged area).

## **Data Analysis**

### ***Prevalence***

The prevalence of cessation of exclusive breastfeeding at each month up to 6 months was calculated using all those who had experienced an "event" up to that month, and dividing it by the total number of infants ( $N = 22,202$ ). The prevalence of factors associated with breastfeeding cessation was calculated for the whole sample and for those who ceased exclusive breastfeeding within the first 6 months.

The outcome variable is time ( $t$ ) in monthly (0–1, 1–2, 2–3 etc.) intervals until an infant ceases to be exclusively breastfed through being fed anything else other than breast milk (other non-human milk, food, or other fluids including formula, soya milk, cow's milk, water, juice, or semi-solid or solid foods).

### ***Survival Analysis: Cox Proportional Hazards Regression***

Time-to-event analysis, known as survival analysis, is a reliable method for dealing with censored cases where it is unknown when the event (introduction of other foods or fluids, including non-human milk or infant formula) has occurred or will occur in the future. The outcome variable (time to event "cessation") was the time (months)



until exclusive breastfeeding was interrupted with the introduction of any other non-human milk or food or fluids.

The assumed survival experience of those infants censored at time (t) was as expected if randomly selected from infants who were at risk at time (t) (Kleinbaum & Klein, 2005). Under the assumption of independent and random censoring, we assumed that infants who were censored at time (t) were representative of all those who remained at risk of cessation with respect to their survival experience. The failure rate for those who were censored was the same as the failure rate for those who remained at risk (continue to be exclusively breastfed). The infant's survival experience (exclusive breastfeeding duration) should therefore be expected to be the same as those who were randomly and independently censored. The measure of effect is the hazard ratio (HR) of ceasing to be exclusively breastfed. It gives the instantaneous potential per unit of time for the "event" to occur given that the infant has continued to be exclusively breastfed up to that time (t).

Kaplan-Meier survival curves were estimated, and a log rank test used for equality/significance for all maternal and infant predictors. Cox proportional hazards (PH) were used to estimate adjusted associations with cessation of exclusive breastfeeding within the first 6 months. A purposeful selection method was used for multivariable model-building. Covariates for the full model were identified based on clinical or biological plausibility, and those known to have a potential effect on breastfeeding practices (Kleinbaum & Klein, 2005; Kramer & Kakuma, 2012; WHO, 1981; Peat et al., 2004). Covariates were systematically added and removed from the full model, and retained in the model based on the significance of their respective Wald test statistics. A partial likelihood ratio test was used to assess the contribution of covariates to the model. Final models were adjusted for confounders. Model adequacy and proportional hazards were assessed using goodness-of-fit statistics: Schoenfeld residuals for the global test, scaled Schoenfeld residuals for each covariate, and plotted scaled and smooth Schoenfeld residuals obtained from the model. (Hosmer et al., 2008; Kleinbaum & Klein, 2005).

A benefit in using the Cox PH model is that the distribution of the survival time variable (outcome variable) does not need to be specified and the time of the event does not change (Kleinbaum & Klein, 2005, p. 555). The key assumption of the PH Cox

regression model is that the hazard ratios are constant or proportional across different covariates and independent of time ( $t$ ). That is, the baseline hazard is a function of time ( $t$ ), but does not involve the explanatory/interaction or predictor variables.

After assessing the PH assumption using graphical approaches, log–log Kaplan-Meier survival estimates were plotted against time ( $t$ ) and log–log Cox survival estimates. For the fitted model, the goodness-of-fit (GOF) testing approach was run, checking any deviations from the PH assumption based on  $p$ -value  $< 0.05$ . Kleinbaum and Klein suggest using the Schoenfeld residuals (p. 181) stating that “if the PH holds then the Schoenfeld residuals are uncorrelated with time ( $t$ )”. Thus, for each covariate in the fitted model, Schoenfeld residuals were obtained for each infant who experienced an “event”. Proportionality was met for all variables in the final model with the exception of mothers’ country of birth, which was used to stratify the final model (Kleinbaum & Klein, 2005).

### **Phase Two: Tasmanian Infant Feeding Study**

The following section outlines the approach used to undertake Phase 2 of this study: the secondary analysis of the Tasmanian Infant Feeding Study (TIF) involving 108 mothers and their children aged from 0 through to 36 months. The TIF study was the first state-based qualitative study to be undertaken in Tasmania to explore infant feeding practices. It gathered mother and child demographic questionnaire quantitative data prior to the mothers participating in 22 semi-structured FG.

In regards to this thesis, the TIF study was used to explore how mothers spoke with each other about their feeding practices, the interruption of exclusive breastfeeding, and how mothers “made sense” of stopping exclusive breastfeeding.

### **Sampling Strategy**

For the FGs, a maximum variation purposeful sampling strategy was used to include a range of information-rich cases (Creswell, Fetters, & Ivankova, 2004; Denzin & Lincoln, 2008; Patton, 2005). Mothers were deliberately recruited from different areas of Tasmania, and with varying factors such as different ages, different socioeconomic backgrounds, and different numbers and ages of children. The inclusion criteria included: mothers 16 years and over with children aged between 0–36 months. Mothers did not have to be breastfeeding at the time. This enabled “exclusive breastfeeding” to be explored in a wider context of the women’s everyday lives. As a requirement of the funding body, 50% of the sample lived in areas classified as socioeconomically disadvantaged using SEIFA ranks (Pink, 2011b), providing a demographically-varied sample.

Several different recruitment strategies were used for the FGs. These were: recruitment within pre-existing groups (e.g. mothers’ groups); snowball sampling (word-of-mouth, mother to mother); advertising and promoting the study within newspapers and flyers at community clinics and hospitals; and direct contact with mothers, health professionals, and support groups.

### **Demographic questionnaire**

Mother and child characteristics including their current feeding practices were collected prior to the start of each FG using a demographic questionnaire (Appendix 9). In summary, the demographic questionnaire asked the following information: maternal year of birth, postcode, highest educational qualification (bachelor degree,

territory, > year 12), employment status (full time, part time), country of birth (Australia, overseas), marital status (married, defacto, single), breastfeeding history (breastfeed before – yes, no), and parity (previous number of live births). For the child: age at the time of the FG (weeks, months, year), whether the child was a single or multiple birth, type of birth/delivery (caesarean, vaginal, forceps), gestational age at birth (weeks), place of birth (private or public hospital, home), how the child was currently being fed as per the last 24 hours (exclusive breastfeeding, exclusive formula milk, formula and breast milk—including expressed breast milk) and if they had stopped “exclusively” breastfeeding, when (months, days). No names or addresses were collected.

### **FGs: Data Collection**

FGs capitalise on communication between participants to produce data (Kitzinger, 1994). In the TIF study, the FG were not employed simply to gather data but were an essential part of the process that maximised the interactions of the mothers with each other and their children. In this way it was possible to explore the shared experiences of mothers in a broad and informal way (Ezzy, 2002). Twenty of the 22 FG were conducted by the author of this thesis (JA), two were run by other researchers (Emily Hansen, and/or Leigh Tesch). Each FG had two researchers present at all times. Each member of the team provided observational support, detailed notes were taken, and team debriefing occurred at the end of each group.

The FG were conducted in the mothers’ communities and were either naturally occurring (e.g. a pre-existing mothers’ group) or constructed for the research (e.g. made up of individuals who had not previously met). Pre-existing groups were comprised of women who usually met, in the same place, at the same time each week or month (such as community play centres, halls, mothers’ homes, community clinics). Constructed groups consisted of women who lived within the community and attended the local Child Health and Family Centre (CHPAS) or Integrated Care Centre (ICC), or who had responded to study advertisements, or been invited by a friend to join the FG taking place in that particular area.

The FG guide (Appendix 8), was developed with the aim of limiting judgmental and closed-ended questions (Pope & Mays, 1995). Thus, broad open ended questions were

used as prompts (e.g. how did that make you feel? Tell me what is it like? Tell us how you are feeding your baby today?). Prompts were used to gain an understanding of the day-to-day experiences of mothers' feeding practices from their personal view: what helped, what didn't, and what needs to change in regards to feeding babies? Breastfeeding was not defined for the women, and the term "feeding babies" was used to explain the purpose of the study. If women asked what was meant by more technical terms such as *exclusive breastfeeding* the facilitators would explain using everyday lay language, i.e. "when you only feed the baby with breastmilk, expressed breastmilk no water, food or other milks, juices". If the mothers used terms that were not clear such as "NAN" (a brand of infant formula) when describing what or how they were feeding, they were asked to "tell us about that?"

To encourage interaction between the women and researchers the following techniques were used:

- The provision of and sharing of food and tea/coffee during the group.
- Mothers were encouraged to bring their children and infants with them to the group.
- The FG were where possible conducted in a non-threatening environments such as homes, community play centres.
- Small FGs of up to 6 and no more than 8 when possible, allowing everyone to be heard and have a say.
- At the beginning the group women were encouraged to introduce themselves and their children and to tell us how they were currently feeding their children (Pope & Mays, 1995; Hansen, 2006; Kitzinger, 1994).

### **Data Analysis**

#### **Demographic data**

The demographic data collection forms were scanned into a password-locked Access database and cross-checked against originals for error by two researchers (JA and an independent student research assistant). There were no missing data, as the forms had been checked for errors or inconsistencies at the time of administration, where mothers were asked to verify any discrepancies or non-responses at the time of completion. To describe the sample, parametric descriptive statistical analyses were

conducted (Portney & Watkins, 2009, p. 385–401). Categorical data were summarised for frequencies, measures of central tendency, distributions, and 95% confidence intervals using the statistical software Stata (v. 12), and tabled using range, percentiles, and standard deviations (SD) where appropriate.

SEIFA indexes described earlier in the quantitative methods section were used to estimate and compare the mothers' relative socioeconomic characteristics according to the mothers' "usual" area of residence and postcode. Each postal area was allocated a relative SEIFA quintile ranging from 1 (most disadvantaged area) to 5 (least disadvantaged area). SEIFA variable was dichotomised into two quintile groups: SEIFA quintiles 1-2 to represent the most disadvantaged areas and 3-5 least disadvantaged areas of residence. All participants postcodes were then ranked on a continuum from most disadvantaged to least against the SEIFA deciles (index rankings and quintiles 1-5) according to Australian Bureau of Statistics social and economic census information (Pink, 2011a).

Pearsons chi-square test ( $\chi^2$ ) were used to assess the differences (association or lack of association) between women living within the most disadvantaged areas of Tasmania (SEIFA quintiles 1-2) and those in less disadvantaged areas SEIFA quintiles >3. The mother, child and feeding variables collected from the demographic questionnaire were dichotomised and included; infant feeding intention prior to birth, initiation of breastfeeding at birth, mother age groups i.e. 25 and or > and 15-24 years, parity, type of birth, education level attained, marital status, current occupation, country of birth, infant gender, age in months' (0-6 months, and 6 months and >), infant birth weight (< 2499 grams and >2500 grams), gestational age, place of birth, method of birth, and current feeding method. To test the relationship between mothers' area of residence (SEIFA), data were arranged in two-way matrix contingency tables and cross tabulations. These were tabled with frequencies, percentages, and p value,  $p < 0.05$  statistically significant, 2 degrees of freedom (df) (Portney & Watkins, 2009, p. 573-576). Although this is not customary, chi square test for association were used to add some depth to the background knowledge needed for the next stage (theoretical and thematic analysis) of the complex FG data (Miles & Huberman, 1994; Robins,

2000a). It is outside the scope of the FG study to undertake any further statistical analysis of the demographic data.

### **Focus Group data**

Audio recordings and field notes were transcribed verbatim and transcripts were checked against the audio recording for accuracy as soon as possible after each FG. Password-protected qualitative data analysis software NVivo (v. 10.2) was used to order and manage the data. Pseudonyms were used in the transcripts to maintain participant confidentiality. Mother demographics were linked to the transcripts using NVivo through the unique demographic questionnaire identification number and pseudonyms. This facilitated cross-checking of themes, sources, references, and adequate participant representation (Bazeley & Jackson, 2013).

NVivo allows “codes” to be generated to house themes generated from the analysis and reduction process. Miles and Huberman, (1994, p. 10) describe data reduction as a continuous process of sharpening, sorting, discarding, and organising data so that the narrative and final conclusion can be verified. It is part of the analysis, and occurs throughout the research process (collection and analysis), and is in fact anticipatory (Miles & Huberman, 1994).

Preliminary data analysis allowed for a broad coding framework to be developed. Preliminary codes included: best for baby, feeding in public places, formula milks and others, help (+) or (-), sadness and loneliness. These were then thematically reduced into one large parent node: cessation. The node “cessation” (and all references and sources) were expanded and reduced theoretically into three principal parent nodes with relevant sub or child nodes, *habitus*, *capital*, *field*, the node “dilution” reflects Bourdieu concept of “practices” (Bourdieu, 1990b). This was supported by using NVivo’s model build and charting facility to refine themes and concepts (Bazeley & Jackson, 2013). Table 4.0.1 shows specific detail of the final abductive theoretical analysis. Thematically reducing the data using Bourdieu’s theory of practice conceptual framework (*habitus*, *capital*, *field*, *practices*) was achieved by selecting and abstracting, sorting and isolating patterns and relationships between variables, and finding commonalities and differences to support formalising the emerging themes (Fetters & Freshwater, 2015). This is understood as an abductive process, where deductive and inductive processes meet (i.e. using a set of codes obtained from

sources such as Bourdieu's theory to examine the data and find examples of these codes) (Tashakkori & Teddlie, 2010, p. 408). Text searches using the "query" option within NVivo verified the frequency of use and relevance of key concepts (Bazeley & Jackson, 2013). For example, searching the transcripts for commonly-used terms such as "best" verified that women used that term to explain why they preferred to breastfeed. The final four key themes: value, allofeeding, endurance (motherhood), and disjuncture, are outlined in Figure 6.

The abductive coding process allowed for the identification of duplication, and for the adequate representation of the majority of the study participants from all FGs. A research log recorded the coding process, ideas, questions, and reflections (Bazeley & Jackson, 2013; Blaikie, 2000).



*Table 4.1. Abductive coding tree for mothers' experiences of stopping breastfeeding.*

	<b>Node</b>	<b>Sources</b>	<b>References</b>
Parent nodes	▼ Capital	24	292
	● Baby	7	22
	● Breast	9	18
	● cultural and social	5	40
	● expressing	15	57
	● Milk	13	70
	● Nipple	8	19
	▼ Dilution	21	88
Child / sub node	● Formula milks	22	56
	● Grief	10	20
	▼ Fields of breasts	23	280
	▶ ● Commodity	8	15
	▶ ● Health	10	33
	▶ ● Younger mothers SEIFA	10	197
	▼ ● Habitus	21	121
	● Best	13	20

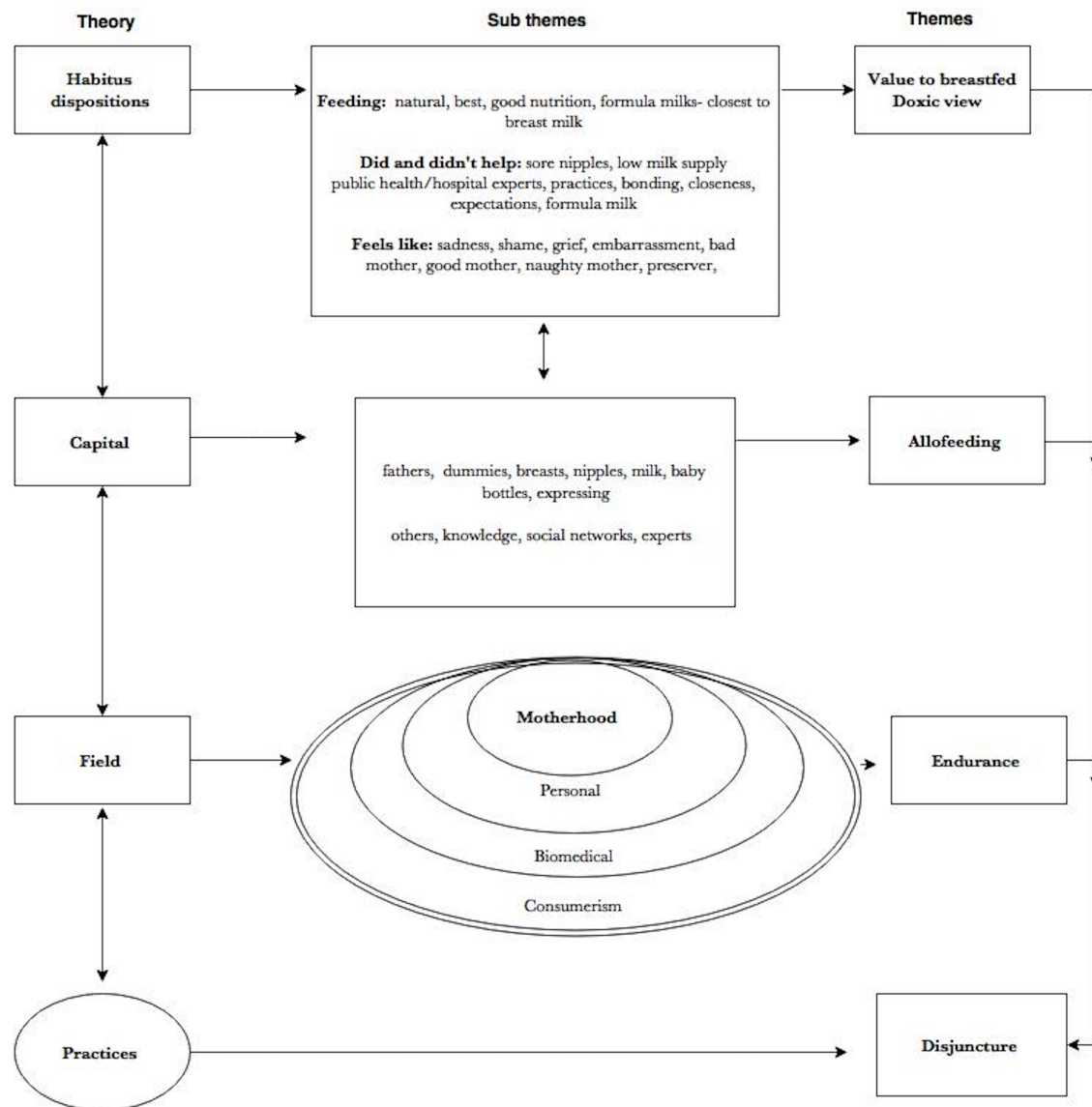


Figure 6. Integrated thematic and theoretical analysis process of the mothers' experiences of cessation of exclusive breastfeeding.

### Integration and Summary

Integration can occur at any stage of the process (Tashakkori & Teddlie, 2010, pp. 594–601). Bryman (2006) refers to 15 rationales for combining qualitative and quantitative data (Bryman, 2006). These include triangulation used to improve validity (Tashakkori & Teddlie, 2010, p. 349), and complementarity where the convergence of data brings a more comprehensive account of the area of enquiry and different research questions; each method is used to answer different research questions (Bryman, 2006). In this study, integration occurred for all the above reasons, and occurred at several points. Demographic questionnaire data was integrated with FG transcripts. Results from the survival analysis were used to explore and compare similarities within the qualitative data, i.e. high rates of initiation of breastfeeding, father's preferences for infant feeding, perinatal depression. Many women focused on their personal intention and/or preference to breastfeed, and referred to the support they received (or didn't) from their partners/fathers of the baby during their struggle to feed their child. Women across the FGs also talked consistently of guilt, anxiety, and sadness when "needing" to use formula, coded as "sadness and loneliness" during preliminary qualitative analysis. Because of the complexity of the FG data, and because multiple factors were associated with cessation, this approach helped to prioritise, merge, and identify themes and key findings (Table 4.3). Integration of data and theory occurred principally at the time of interpretation and write-up.

### Reflexivity: Questioning knowledge

---

*Reflectere* means to back-bend (Bourdieu & Wacquant, 1992)

---

This brief section is a reflection on the researchers' place in the mothers' FG process. It is central to Bourdieu's theory in that it honours the weight Bourdieu placed on looking backwards, "turning the instruments of his science on himself" (Bourdieu & Wacquant, 1992, p. 36) where researchers question, identify, and consider their own assumptions, perceptions, beliefs, and stances on the topic.

Bourdieu's concept of "reflexivity" explores the cyclic nature of questioning knowledge from the researchers' perspective. As Bourdieu and Wacquant (1992) suggest in the above quote, reflexivity "returns" the researcher, society, and science

upon itself. (Bourdieu & Wacquant, 1992, p. 6). Before the qualitative findings are presented, this brief chapter looks back upon the FG process and mothers' experiences, observing and examining the researchers' place in that process. This will attempt to make sure that the methods (the way the research is conducted) are compatible with the other elements, including the research question and desired outcomes. Blaikie (2000), encourages social science researchers to identify and consider their own assumptions, perceptions, beliefs, and stances on the topic so that the methods fit with the methodology and vice versa (Blaikie, 2000). Reflexivity also helps expose and minimise any biases, as each researcher brings their understandings, perceptions, and values to the social research process. Miles and Huberman (1994) state that the researcher cannot be separately "detached" from their objects of study, just as the objects of study cannot be detached from the subject.

### **Questioning knowledge**

As described in chapter Three, (theoretical framework), reflexivity (where the researcher turns the research process on themselves) is central to Bourdieu's methodological and theoretical approach to gaining deeper understandings of "why people do what they do" in their everyday lives. The process then becomes a collective enterprise that promotes self-awareness (Bourdieu & Wacquant, 1992, p. 36–40). The triangulation of Bourdieu's theory, observation, and reflexivity expand and give meaning to the mothers' experiences. In many ways, this approach adds complexity to an already complex dynamic phenomenon. Reflexivity also provides a means by which the researcher can attempt to recognise their objective and subjective position—"the objectification of the objective" (Bourdieu & Wacquant, 1992). In short the researcher is as much a social agent as the participants are.

Bourdieu and those who write about his work neglect to explain how uncomfortable reflexivity can be for the researcher. Consciously debating the worth and truth of my own values, experience, and social context during the research process—during each FG, and during analysis—creates tension between the researcher, participants (mothers and their children), and the research process. This reflective tension offers a new layer to the dynamics of an intimate personal experience, such as breastfeeding, for both the researcher and participant. The cyclic nature of reflexivity authenticates

the research process and in turn highlights the authenticity and honesty of each of the mothers' stories. It is the unpicking of these stories that is aided by reflexivity.

### **Mothers and reflexivity**

Reflexivity offers a way for the researcher to “dance” with the participants during the FG, in brief conversations before and after the groups, by email, or in phone conversations. Every element of exchange offers a window into a mother's world and experience, to briefly participate in their day-to-day lives or experience and write about it from their perspective (Ezzy, 2002, p. 11). What makes Bourdieu's use of reflexivity relevant to this study is that it does not undermine or ignore the tension between and relevance of subjectivity or objectivity, but increases the scope and authenticity of the mothers' experiences and stories, and their place and mine in those stories (Bourdieu & Wacquant, 1992).

The FG study provided a large volume of multidimensional and complex data. The task set before me, as Ezzy would suggest, was to unravel the complexity (Ezzy, 2002, pp. 138, 140). Ignoring the epistemological positions and insights from my social, academic, personal, and external social structures would produce simplistic interpretations of the mothers' stories. Therefore, as challenging as it was, critically interpreting my experiences as a professional, mother, and researcher meant acknowledging that I would be writing myself into the findings.

When recruitment began for the TIF study, the response was overwhelming. More than 300 expressions of interest came from the initial email circulation, and countless phone enquiries were received. These came from mothers, fathers, grandmothers, professionals, and non-government, and government organisations. Women left emotionally-detailed phone messages and wrote lengthy emails explaining their stories and views on breastfeeding. Males and females in my workplace stopped me in corridors to discuss the study and offer theirs or their friend's stories, or the experiences of their daughters and sons. These were always laced with sadness and regret at “not being able to breastfeed”, and full of complexity. By asking the broad question “tell us about how you are feeding your baby?” the metaphorical download button had been pressed.

The download analogy was not intended to belittle or dilute the significance of what appeared to be the agents' (mothers') need to talk. The stories and interest in the study actually caught me off guard. Women's need to talk about feeding (or, *not* breastfeeding) heightened my own uncertainty of what I believed and understood to be mothers' day-to-day experiences of feeding their children. The mothers' need to recount and talk about their feeding experiences was evidenced in the earlier pilot study (Ayton et al., 2014). Building on this, I questioned whether the study was just receiving interest from those who had something to say, and wondered about those women who had not or could not make contact, those whose feeding experience was good, those who did not feel they could talk or wanted to talk. The sampling strategy described in the methods chapter 4 dealt with this effectively.

There were times during the FGs that I did not understand what my position was. I was not a mother currently breastfeeding, though I had breastfed my own children. I was not there in the capacity of a health professional, although I was one and had insight into hospital practices, professional practices, and the maternity healthcare system. The women were not informed of my professional background, as I feared this would make them uncomfortable and limit their freedom to express their feelings towards the healthcare system. They may also have made assumptions about what "side" I was on (system or mothers). The truth is I felt that I was not on anyone's side. I often felt isolated by the mother's stories, as I could not offer any advice or support to them. Perhaps this was a reflection of the mothers' own feelings of isolation, helplessness, confusion, and the tension that is created between the subjective and objective as they expressed feelings on the process of breastfeeding as Chloe did: "I just don't – it blows my mind that ... something that's natural, that's what your breasts are for, can be so difficult". (Chloe, 28) To understand stopping, I had to understand breastfeeding as both an individual and a group process. Disentangling this from the multifaceted stories was an enormous task.

Biomedical models commonly use algorithms or tools of clinical assessment. This provides a means to distance you (the health professional or researcher) from the patients' experiences and lives. Consultations are structured to a time limit and place (usually an office or clinical setting), where the balance of power is uneven, and within the frame of clinical diagnosis with the aim of providing a treatment plan and

solution. This reduces the individual's experience to the lowest common denominator of biology, and blinds us to the effects of the mother's social world on her choices and practices (White, 2013, pp. 4–6). This also disempowers the mother from revealing her social world to the clinician. Commonly, mothers present with one problem at a time to be categorised and solved. What I observed in each FG (conducted in homes, play centres, community meeting rooms, and university settings) were multiple convoluted layers of patterned social realities. The burden was how to represent, interpret, and make sense of the experiences of the women in an informed, meaningful, and dignified way, without objectifying their experiences and reducing them to simply “events”, or recounting them as “spectacles”. Breastfeeding and not breastfeeding are in equal measures a phenomenon that needs to be “practically resolved” (Bourdieu & Wacquant, 1992, p. 39).

Reflexivity is an ongoing process. It often provides no answers but represents an important intersection where the authenticity of the data and the researcher's place in that data (mothers' experiences) may be clarified: “the knowledge generated is “injected” back into the reality it describes” (Bourdieu & Wacquant, 1992, p. 37).

### **Conclusion**

In the following chapter the findings are presented. Phase 1 outlines the secondary analysis of the ANIFS 2010 cross-sectional survey quantitative data analysis. This is followed by Phase 2, where the mothers' experiences are described using Bourdieu's concepts of *field*, *habitus*, and *capital*). This chapter reinterprets the mothers' experiences of breastfeeding and cessation under the key themes distilled from the abductive theoretical analysis (motherhood, endurance, value, allofeeding, and disjuncture) are outlined.

## 5. FINDINGS

### Phase 1 Quantitative Survival Analysis

This chapter presents the findings from Phase 1 of this study. The results from the secondary analysis of the ANIFS and the Tasmanian state qualitative FG study are presented separately and in this order. Selected results from the Cox proportional hazard regression modelling of the Australian national representative sample of 22,202 mother-child pairs derived from the ANIFS are presented. This analysis addresses the research questions: What are the National prevalence rates of premature cessation of exclusive breastfeeding from birth up to the first 6 months? What factors are associated with premature cessation of exclusive breastfeeding in the first 6 months? These results have been published (Ayton, Van der Mei, Wills, Hansen, Nelson, 2015).

Infants aged from birth through to 6 completed months of life who had initiated exclusive breastfeeding at birth were the main unit of analysis. Mother characteristics are reported first, followed by the prevalence combined effect of having multiple key risk factors associated with cessation of exclusive breastfeeding within the first 6 months.

#### **Mother and infant characteristics**

The final sample ( $N=22,202$ ) consisted of infants who had initiated exclusive breastfeeding at birth, meaning that the infants in this sample had been fed directly from the breast (or with breast milk) at or around the time of birth, and were aged from 0 through to 6 completed months as outlined in the chapter 4, Methods: Phase One.

Mother and infant characteristics are detailed in Table 5.1. In this nationally-representative sample, 10% of mothers were aged less than 24 years, with those aged over 30 years making up three quarters of the sample. More than half of the mothers had an education attainment level of diploma/certificate or below (59%), had given birth to more than one child (57%), and had a yearly household income less than \$88,399 per annum (57%). The majority of women (93%) had reported that a spouse



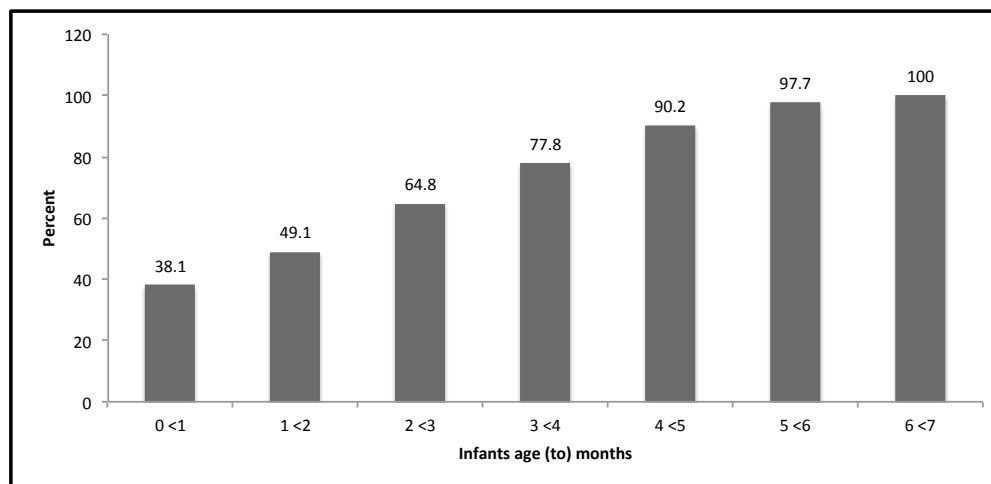
or partner were living in the house, 74% were born in Australia, and only 2% reported Aboriginal or Torres Strait Island (ATSI) origin.

Fifty-four percent of mothers were on employment leave or had taken leave at the time of survey completion, with 9% reporting that they had been diagnosed with perinatal depression (PND) (defined as a range of mood disorders affecting a woman during pregnancy and after the birth of her child) including prenatal depression, “baby blues”, postpartum depression, and postpartum psychosis. (AIHW, YEAR) Mothers from the most disadvantaged socioeconomic areas (1st quintile) represented 13% of participants, compared with 26% from the least disadvantaged (5th quintile). The smaller Australian states and territories (South Australia, Tasmania, ACT, and Northern Territory) had fewer respondents compared to NSW, where 32% of survey participants resided. The Tasmanian sample made up 2% ( $n = 534$ ) of the total.

Three-quarters of infants were delivered via a vaginal birth (67%), with 33% being born through caesarean section—either emergency (15%) or planned (18%), respectively. The proportion of males (51%) was slightly higher than females, with 6% of infants born preterm (at less than 37 completed weeks’ gestation), and 5% born at low birth weight (< 2499 grams). More than 70% of the infants had received skin-to-skin contact, where the infant is placed onto the mother’s chest immediately after birth. (WHO–UNICEF., 2008) Two-thirds of the sample (35%) had received expressed breast milk (EBM), and half of the infants (53%) had used a dummy or pacifier regularly within their first 6 months of life. Just over half (57%) of the mothers’ partners had indicated that they preferred breastfeeding as a method of feeding, with 41% having no preference.

### **Cessation of exclusive breastfeeding**

Figure 7 shows the proportion of infants at each monthly interval ceasing exclusive breastfeeding from birth to six completed months. More than half of the infants who initiated exclusive breastfeeding at birth had ceased within the first 2 months of life (49%) rising to 90% having interrupted the process of exclusivity by being fed other food or fluids, including infant formula milks, soon after reaching 4 months of age.



*Figure 7. Proportion of infants ceasing exclusive breastfeeding at each age interval from birth to 6 completed months (N=22,202), values are in percentage.*

Among those infants who were initiated into exclusive breastfeeding at birth, 49% had ceased (received non-human milk, food, or other fluids) by two months, and 78% by four months of age (Figure 7). Table 5.1 shows the unadjusted and adjusted hazard ratios (HR) for factors associated with cessation of exclusive breastfeeding within the first 6 months. After adjusting for potential confounders, the risk of cessation increased by 86% when the mother's partner preferred bottle-feeding, and by 73% when the partner was indifferent to feeding method (no preference). Adjusted Kaplan-Meier curves illustrate the differences (Figure 8). Regular dummy use was also associated with a 37% increased risk of stopping compared to no dummy use; Figure 9 demonstrates the adjusted Kaplan-Meier curves of cessation. Having perinatal depression increased the chance of stopping exclusive breastfeeding by 15% with Figure 10 showing the adjusted Kaplan-Meier curves of cessation. Mothers who were obese had a 29% increased cessation risk compared with mothers of normal weight, and being underweight was associated with a 13% risk of cessation. Maternal smoking, and no skin-to-skin contact at birth, were associated with a 20% increased risk of cessation, whilst lower education level, younger mothers (< 24 yrs.), giving birth via caesarean section (elective) and, regular feeding with expressed breast milk were associated with a 7 to 15% increased risk of cessation within the first 6 months. Employment leave did not significantly affect the risk of cessation in the unadjusted analysis when compared to taking leave; however, after adjustment, not taking leave showed a 5% reduction in the risk of cessation.

Overall, socioeconomic status appears to have an effect on the risk of cessation only slightly. In the adjusted model, a lower SEIFA quintile (most disadvantaged) was not strongly associated with cessation ( $p = < 0.001$  for test for trend), compared to the higher quintiles (least disadvantaged). The lowest two quintiles showed only a 6% and 8% increased hazard of ceasing respectively compared to 5% for quintile 4 (Table 5.1) Adjusted Kaplan-Meier curves illustrate the similarity in survival curves for the SEIFA quintiles (Figure 11).

*Table 5.1. Prevalence, hazard ratios (HRs) and 95% confidence intervals (95% CI) for factors associated with cessation of exclusive breastfeeding within the first six months (N = 22,202). Values are in %(n)*

	Whole sample (%) <i>n</i>	Unadjusted		Adjusted	
Variable		HR (95% CI)	<i>P</i> value	aHR (95% CI)	<i>P</i> value
Mothers age (years)					
+35	(29.0) 6,420	1 (Ref)			
30 to 34	(36.0) 7,997	0.98(0.95 to 1.02)	0.39	0.98(0.94 to 1.02)	0.28
25 to 29	(25.3) 5,620	1.08(1.04 to 1.13)	<0.001	1.02(0.97 to 1.05)	0.43
15 to 24	(9.7) 2,165	1.33(1.26 to 1.40)	<0.001	1.11(1.07 to 1.22)	0.001
Education level					
Postgraduate/Bachelor degree	(41.0) 9,119	1 (Ref)			
Diploma/Certificate	(36.0) 7,986	1.28(1.24 to 1.33)	<0.001	1.16(1.12 to 1.21)	<0.001
< Year 12	(23.0) 5,097	1.28(1.23 to 1.33)	<0.001	1.15(1.10 to 1.20)	<0.001
γSEIFA					
Quintile 5 (least disadvantaged)	(26.2) 5,818	1 (Ref)			
Quintile 4	(23.1) 5,141	1.08(1.04 to 1.14)	<0.001	1.05(1.01 to 1.10)	0.02
Quintile 3	(21.1) 4,675	1.10(1.05 to 1.15)	<0.001	1.02(0.97 to 1.06)	0.48
Quintile 2	(16.2) 3,593	1.14(1.09 to 1.20)	<0.001	1.06(1.01 to 1.11)	0.02
Quintile 1 (most disadvantaged)	(13.4) 2,975	1.19(1.13 to 1.25)	<0.001	1.08(1.02 to 1.14)	0.01

Mothers current smoking status					
No	(90.2) 20,034	1 (Ref)			
Yes (daily / occasional)	(9.8) 2,168	1.42(1.35 to 1.49)	<0.001	1.20(1.14 to 1.26)	<0.001
Mothers BMI					
Normal	(47.9) 10,628	1 (Ref)			
Underweight	(2.4) 524	1.06(0.96 to 1.18)	0.22	1.13(0.79 to 0.98)	0.02
Overweight	(29.8) 6,624	1.26(1.14 to 1.41)	<0.001	1.16(1.12 to 1.20)	<0.001
Obese	(19.9) 4,426	1.52(1.37 to 1.69)	<0.001	1.29(1.24 to 1.35)	<0.001
Perinatal depression					
No	(91.6) 20,336	1 (Ref)			
Yes	(8.4) 1,866	1.26(1.20 to 1.33)	<0.001	1.15(1.09 to 1.21)	<0.001
Method of birth					
Vaginal	(66.8) 14,835	1 (Ref)			
Caesarean	(33.2) 7,367	1.25(1.21 to 1.29)	<0.001	1.11(1.07 to 1.15)	<0.001
Currently on leave from employment					
Yes	(53.9) 11,961	1 (Ref)			
No	(46.1) 10,241	0.98(0.95 to 1.01)	0.13	0.95(0.92 to 0.98)	0.003
Living with Spouse/de facto partner					
Yes	(93.3) 20,707	1 (Ref)			
No	(6.7) 1,495	1.31(1.24 to 1.39)	<0.001	1.06(0.99 to 1.12)	0.04
Partners feeding preference					

Breast	(56.7) 12,596	1 (Ref)			
Bottle	(1.9) 421	2.08(1.89 to 2.31)	<0.001	1.86(1.69 to 2.06)	<0.001
No preference	(41.4) 9,185	1.47(1.43 to 1.52)	<0.001	1.37(1.33 to 1.42)	<0.001
Skin to Skin contact at birth					
Yes	(77.4) 17,185	1 (Ref)			
No	(22.6) 5,017	1.39(1.34 to 1.44)	<0.001	1.20(1.16 to 1.25)	<0.001
Dummy use					
No	(46.9) 10,416	1 (Ref)			
Yes	(53.1) 11,786	1.47(1.43 to 1.52)	<0.001	1.35(1.31 to 1.39)	<0.001
Received Expressed Breast milk					
No	(64.7) 14,369	1 (Ref)			
Yes	(35.3) 7,833	1.13(1.09 to 1.17)	<0.001	1.07(1.03 to 1.11)	<0.001

Log likelihood- 798142.78 (1-df).  $p < 0.05$  = statistically significant. Test for trend  $p > 0.001$  are based on Cox PH models

aHR adjusted Cox PH regression analysis imputed model (stratified by mother's country of birth). Model adjusted for parity, infant sex, birth weight, gestational age. æCaesarean section; combined elective or planned and emergency. γ SEIFA; Socio Economic Indexes for Areas

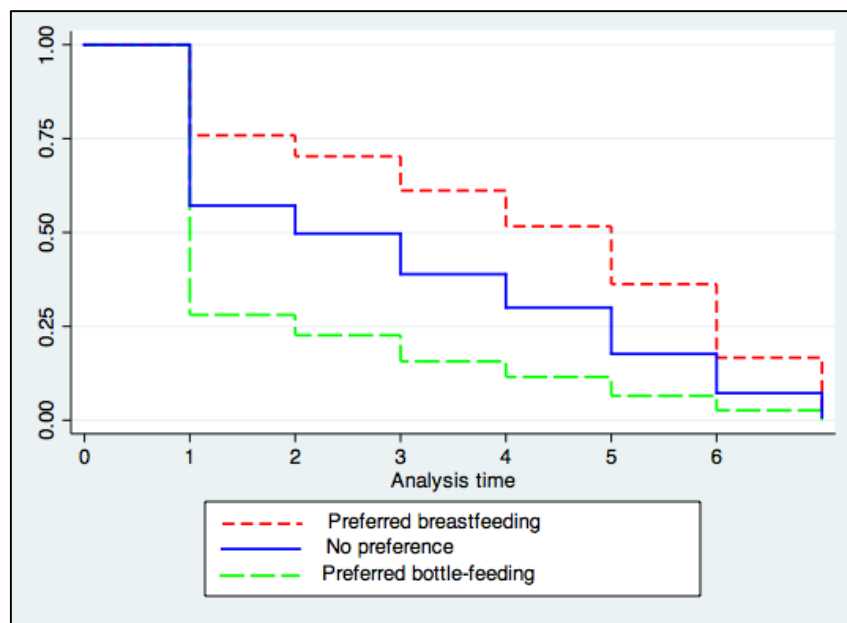


Figure 8. Kaplan-Meier survival curves for cessation of exclusive breastfeeding by fathers' infant feeding preferences, comparing breastfeeding, bottle feeding, and no preference ( $p$  = adjusted for mother age and parity, education level)

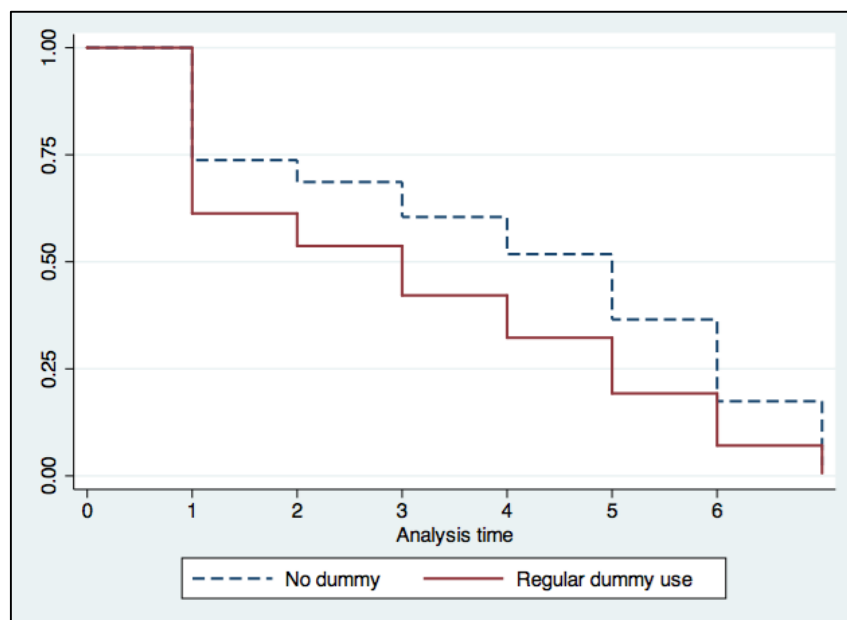


Figure 9. Kaplan-Meier survival curves for cessation of exclusive breastfeeding by regular dummy use by no dummy use ( $p$  = adjusted for mother age and parity, education level)

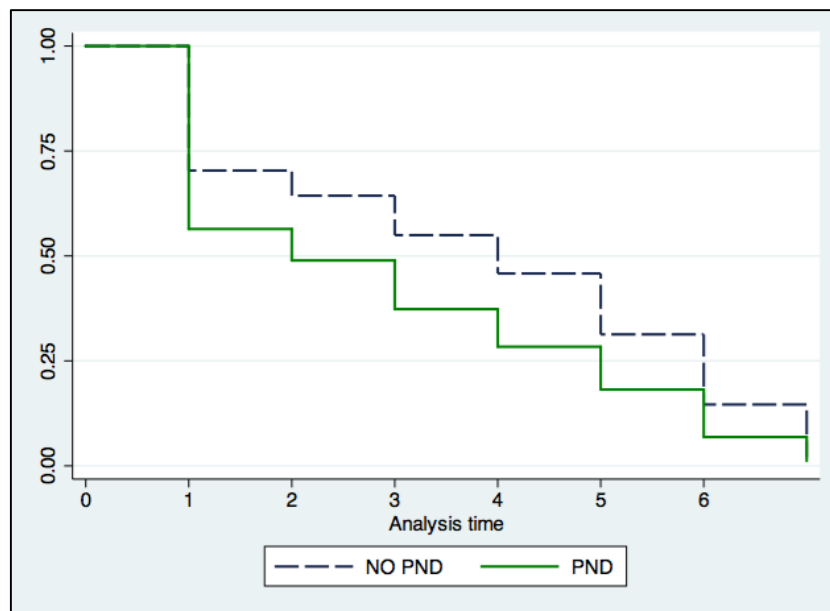


Figure 10. Kaplan-Meier survival curves for cessation of exclusive breastfeeding by perinatal depression, comparing no perinatal depression ( $p$  = adjusted for mother age and parity, education level)

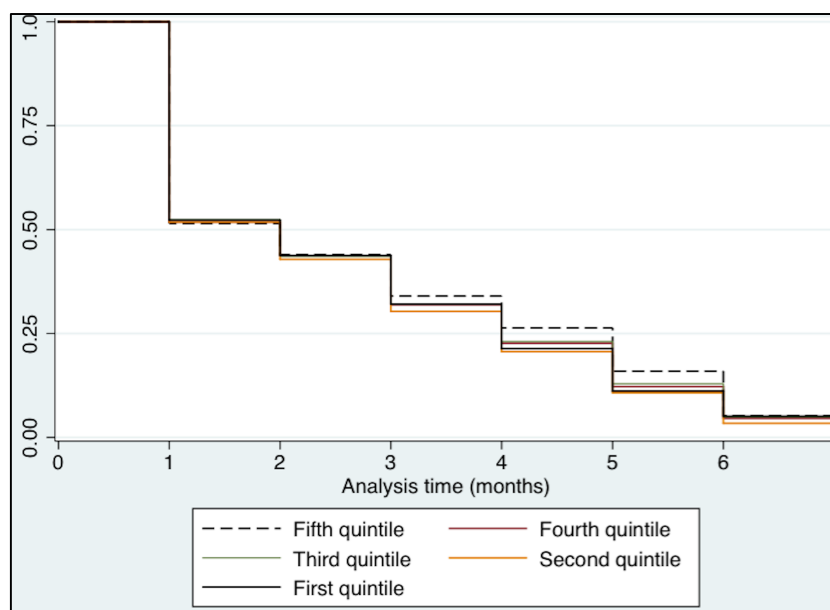


Figure 11. Kaplan-Meier survival curves for cessation of exclusive breastfeeding by SEIFA, comparing quintiles 1st (most disadvantaged) through to least disadvantaged



*5th quintiles (least disadvantaged) ( $p$  = adjusted for mother age and parity, education level)*

### **Summary of Phase 1 Quantitative Findings**

In summary, the secondary analysis of this Australian national sample shows that for those mother-infant pairs who had initiated exclusive breastfeeding at birth, more than half of the infants had ceased exclusive breastfeeding within the first 2 months of life. The final survival analysis indicated that multiple factors were associated with cessation within the first 6 months. The two key factors – the partners’ infant feeding preference (bottle, or indifference to the feeding method pre-birth), and regular dummy use— significantly increased the risk of cessation within the first 6 months of life. Overall socioeconomic status (SEIFA) appears to have an effect on the risk of cessation only slightly. Other risk factors, such as the mothers’ education level and perinatal depression, have the potential to inform interventions and are potential flags for the early interruption of exclusive breastfeeding.

### **Phase 2 Findings: Tasmanian Infant Feeding Study Focus Groups**

Data from 22 FGs involving 108 Tasmanian mother-child pairs were used to explore mothers' experiences of breastfeeding and early cessation of exclusive breastfeeding. The FG study was designed to address the research questions: What are mothers' experiences? How do they make sense of cessation?

Analysis of the FG data is presented in two consecutive sections. This chapter begins with summaries of the mother and child characteristics, giving an overview of who they were and how mothers were feeding their children at the time of the FG. This data is derived from the demographic and feeding questionnaire each mother completed before their FG session started. The next section is titled "group dynamics", and describes how the mothers interacted with each other in FG, providing context to the mothers' narratives. This section of the chapter demonstrates how the FG method used shaped the type of data collected in a positive way. The findings major chapter section presents the thematic analysis.

#### **Mother and child characteristics**

##### ***Mothers***

As discussed in Chapter 4, the sample frame for the TIF study included mothers living in Tasmania who were aged above 16 years of age with children aged less than 3 years. Participants did not need to be breastfeeding at the time of the FG. All mothers who participated in a FG completed a short demographic questionnaire (Appendix 9) before the group began their discussion. This section provides an overview of mother and child characteristics derived from the parametric descriptive analysis of that data as described in the Methods Chapter 4.

The mothers and their children's characteristics and feeding practices are listed in Tables 5.2 and 5.3. A total of 108 mothers participated in 22 FGs across southern (13) and northern (9) Tasmanian between May, 2010 and March, 2011. One mother (who met inclusion criteria) was pregnant at the time of the study resulting in 107 children. Overall, the mean age of the mothers was 29 years (SD 5.8), 26% of mothers were aged less than 24 years, and 64% were first time mothers. The majority of women were either living with their partner in a married or de-facto relationship (82%).

Almost half of the women (48%) were living in areas classified as socioeconomically disadvantaged (SEIFA 1–2) (Pink, 2011a). A greater proportion of younger mothers aged < 24 years (42%) were living in the most disadvantaged areas of Tasmania (SEIFA 1–2) compared to older mothers at 11% ( $p = < 0.001$ ). Aggregated measures of socioeconomic position such as SEIFA may not tell the complete story about a mother's social position; some 43 mothers living in the most disadvantaged areas—83% of mothers in those areas—reported lower education levels when compared with mothers from areas classified as more advantaged (SEIFA 3–5), where only 22 (39%) reported lower education ( $p = < 0.001$ ). However, not all women living within the most disadvantaged areas had low education levels; the analysis revealed that 9 (17%) of mothers living within the most disadvantaged areas had Bachelor degrees or higher (Appendix 11).

*Table 5.2. Characteristics of the mothers who participated in the 22 FGs (N = 108).  
Values are in (%)n mean  $\pm$  standard deviation*

<b>Mother Characteristic</b>	<b>(%)</b>	<b>n</b>	<b>Mean <math>\pm</math> SD</b>
Feeding Intention			
Breast	(92)	100	
Formula and/or other	(7)	8	
*Previously breastfed	(40)	43	
Maternal age (years)			29 $\pm$ 5.8
15-24	(26)	28	
25-29	(25)	27	
30-34	(31)	34	
35 or older	(18)	19	
Parity			2 $\pm$ 0.9
Pregnant (never given birth)	(1)	1	
One (given birth once)	(64)	69	
Two or more	(35)	38	
Maternal smoking	(18)	19	
Marital status			
Married - Living with partner	(53)	57	
De-facto Living with partner	(29)	31	
Divorced	(3)	3	
Single parent	(16)	17	
Current Occupation			
Professional	(31)	33	
Clerical/Admin or Service/Sales	(14)	16	
Home duties /self employed	(35)	38	
Student or unemployed	(20)	21	
Full time	(63)	67	
Part time/casual	(37)	41	
**SEIFA quintiles			
Quintile 1(most disadvantaged)	(41)	44	
Quintile 2	(7)	8	
Quintile 3	(18)	19	
Quintile 4	(21)	23	
Quintile 5 (least disadvantaged)	(13)	14	
Education status			

Bachelor degree and or higher	(40)	43
Diploma	(35)	38
Year 12 or below	(25)	27
Country of birth		
Australia	(93)	100
Overseas	(7)	8
*Previously breastfeed: Any breastfeeding irrespective of length of time (hours, days, weeks or months) ** SEIFA quintiles: Socio Economic Index for Areas		

### ***Infants and Children***

At the time of the FG study, 54% of children were aged between 6 - 18 months, (mean age of 48 weeks), with a quarter aged less than 6 months. Overall, the majority of children (94%) were born at or above normal birth weight (NBW, greater 2500 gm), with a mean birth weight of 3307 gm (726 SD). Overall the majority of children (88%) were born after 37 completed weeks gestation (WHO, 2010). Approximately three-quarters of the children were born in a public hospital (62%) and 27% were born via a caesarean section (Table 5.3). There was a statically significant relationship between SEFIA and whether the child was born in a public or private hospital, via caesarean or vaginal birth, and in current methods of feeding. The proportion of caesarean sections was greater for women and children living in less socioeconomically disadvantaged areas, at 76% against 24% respectively (Appendix 11).

### ***Infant Feeding characteristics***

Study participants self-reported how they were feeding their child at the time of the FG based on the previous 24 hours. Tables 5.2 and 5.3 show that the majority of women (92%) “intended to breastfeed” prior to the birth of “this infant/child”, and 98% had initiated breastfeeding at or around the time of birth. Less than half of the women (40%), had previously breastfed. There was no statistically significant relationship between feeding intention (breast or formula feeding) and SEIFA, with 88% of women living in the most disadvantaged areas of Tasmania (SEIFA 1–2) reporting that they “intended to breastfeed” prior to birth, compared with 96% of those living in less disadvantaged areas ( $p = 0.114$ ), (Appendix 11).

A similar proportion of children were either “exclusively breastfeeding” (15%), or being fed formula milk (14%), at the time of the study. Very few children (6%) were mixed-fed (breast and formula), with a slightly larger proportion of children being fed family foods plus infant formula (36%), compared to 29% being fed family foods plus breastfeeding (including EBM, respectively. Overall, at the time of the study nearly three-quarters of the children (56%), were receiving infant formula milks, either partially or fully (Table 5.2).

*Table 5.3. Infant and child characteristics (N = 107), of the mothers who participated in the 22 FGs Values are in (%)n mean  $\pm$  standard deviation)*

Characteristic	(%)	n	Mean $\pm$ SD
Male	(49)	53	
Age (weeks)			48 $\pm$ 34.5
Age groups (to months)			
0-6	(33)	35	
6-12	(34)	36	
12 -18	(20)	21	
18>	(14)	15	
Birth weight (grams)			3337 $\pm$ 655
$\leq$ 2499g	(11)	12	
$\geq$ 2500g	(89)	95	
Gestational age at birth (weeks)			39.1 $\pm$ 2.2
<sup>+</sup> Preterm	(12)	13	
<sup>++</sup> Term	(88)	94	
Single birth	(95)	102	
Place of birth			
Home	(2)	2	
Public hospital	(62)	66	
Private hospital	(36)	39	
Type of birth			
Vaginal	(58)	62	
<sup>††</sup> Instrumental	(15)	16	
<sup>†</sup> Caesarean	(27)	29	
Infant Feeding practices			
Initiated breastfeeding	(98)	106	
<sup>**</sup> Exclusive breastfeeding	(15)	16	
Infant Formula milk	(14)	15	
Breast milk and infant formula milk (includes <sup>***</sup> EBM)	(6)	6	
Family foods & breast milk (includes EBM)	(29)	31	
Family foods & other milk/fluids (includes infant formula)	(36)	39	

<sup>+</sup>Preterm: born at less than 36.<sup>6/7</sup> completed weeks gestation <sup>++</sup>Term: born on or greater than 37.<sup>0/7</sup> completed weeks gestation.(WHO, 2010)<sup>††</sup> Instrumental: vaginal delivery by forceps or ventouse. <sup>†</sup>Caesarean: combined emergency and elective caesarean delivery ! Initiated breastfeeding: breastfed at the breast or received colostrum (ref). <sup>\*</sup>Self-reported data at the time of

---

the FG. \*\*Exclusive breastfeeding: breast milk only no other foods or fluids with the exception of vitamins, oral rehydration solutions. \*\*\*EBM: expressed breast milk. (WHO–UNICEF, 2008)

---

### **Group Dynamics: Focus Groups with Mothers**

How women feed their children is located in time and social space (Blum, 2000a). This social space is motherhood—a complex class arena where capital is exchanged and mobilised to benefit, profit, or reward the agent (Bourdieu, 1990b). Keeping this in mind, and to avoid a situation where mothers simply told us what they felt the researchers wanted to hear, or repeated the health recommendations (Williams, 1995), each FG opened with the mothers introducing themselves and their children and responding to the question “tell us how you are feeding your baby today?”. Prompts (appendix 8) such as “tell us about that” or “how did that make you feel?”, and “what helped, what didn’t help”, were then used to stimulate further discussion when necessary. In the main, however, the participants generated their own conversations as the researchers sat as bystanders.

Regardless of their age, social status, or education level, mothers talked about pregnancy and birth as one linked process, and breastfeeding as a discrete event in their lives. Talking about feeding, mothering, and breastfeeding problems was viewed by participants as an “intensely personal thing” that only those who had “tried” and experienced breastfeeding a baby could understand. By default, this excluded all those who had not given breastfeeding a go or were not mothers. Kayla (20 yrs.) reflected: “It’s only after you go through it that you really get it, no one can teach you this stuff or really understand.”

Collectively, the groups were powerful and generated intense discussions surrounding their rights as women to breastfeed, and the grief many participants felt when they “had no choice but to use formula”. Women told the researchers that they wanted to talk about feeding (particularly about not breastfeeding, and the use of formula milks). Participants often seemed to use the FG as a way of trying to make sense of their experiences. However, for many the “trauma” of not breastfeeding was shared but could not be resolved. Women began talking about their experiences of feeding before the FG began, during, and then continued after the group had concluded. Mothers asked questions of each other, themselves, and with the researchers: “Is breastfeeding



really beneficial?” Was breastfeeding and breast milk really all that they were told by health professionals? “Why am I doing something that is causing me so much pain and anxiety?” After the sessions ended participants often told the researchers that they felt that they had benefited from listening to other mothers’ experiences. In many cases, they suggested that their friends and family members should join the study.

The shared physical and emotional experiences of pregnancy, birth, lactating, and feeding helped our participants to recognise each other as members of a club (what I refer to as the social field of motherhood later in this chapter). Having young children present in the FGs also brought mothers together further, creating common ground. The noise and distractions generated by the children also appeared to give mothers liberty to relax and share with others, further facilitating interaction. Their membership of the motherhood “club” helped the FGs to function, and gave women know-how (social capital) that they could use to relate and empathise with each other’s individual experiences (Robbins, 2000b). Mothers in FGs abided by hidden rules and laws of functioning, one of which was to be supportive of each other, regardless of how they fed their children (Savage & Silva, 2013).

Mothers in the groups tended to adopt a role in the FG associated with their feeding practices. They often gave names to themselves such as breast-feeders, bottle-feeders, triers, fighters, failures, bad mother, good mother and naughty mother. While women often judged themselves and gave themselves names such as “bottle-feeder”, they did not appear to judge each other. Using infant formula milk was covertly and overtly discussed in what appeared to be an effort to not attribute blame and make others feel guilty for “needing to formula feed”, with some mothers stating “it’s not her fault that she couldn’t do it [breastfeed]”. “Not breastfeeding” was a commonly used “code” for infant formula milk feeding.

Mothers openly supported each other’s choices and experiences (good and bad). and were observed to nod, agree with, and often listen intently to each mother’s story, encouraging each other with words such as “really, how did that feel?”. or “I didn’t find that”, and “my experience was similar”. Mothers reassured each other upon hearing that a member of the FG had tried but couldn’t breastfeed. This was frequently accompanied by other women physically pointing to, stroking, or picking

up other mothers' children, exclaiming "he (child) looks healthy enough", or "she's doing OK now", and "he's thriving now". Participants often acknowledged that the "thriving" children present were "living evidence" that young children grow and achieve wellbeing irrespective of individual infant feeding choices. Hearing that others had experienced anxiety, pain, perinatal/postnatal depression, isolation, and loneliness, and had either enjoyed or hated breastfeeding, produced a sense of relief and reassurance for the mothers.

There were some apparent differences between groups in terms of how mothers communicated about their experiences. When groups made up of older and more educated mothers were asked the question "tell us how you are feeding your baby?" or "what happened in the beginning?" they tended to reflect on their own personal experiences and share lengthy, detailed, and often very emotional stories around the breastfeeding process, the stopping process, and the birth. Younger women tended to be briefer and blunter when talking about their experiences.

Mostly, the FGs were made up of mothers who had preferred to, and had initiated, breastfeeding at or around the time of birth. At the time of the study, women were feeding their children in a variety of ways (breast, bottle, expressing, formula, foods, water, juices). However, one FG included bottle-feeding mothers only. Initially, the eight women in this pre-existing group (a mothers group that met fortnightly at each other's houses) appeared a little guarded, declaring at the start that they were a "bottle-feeding group and may not be of much use". All the women in this group had initiated breastfeeding at the birth of their children, even if they, as Victoria (28), stated, were unsure if they "really wanted to do it". As the group discussion continued, and the mothers became more comfortable with the researchers, the conversation began to flow more smoothly.

One large pre-existing group of 10 younger women split off into two distinct groups during the FG. This was difficult to manage and shaped the information obtained. Mothers in this group did not initially spark off each other and only after a lengthy period of 1.5 hours did the group come together and begin talking about the difficulties associated with breastfeeding and feeding in public as a young mother. This common experience seemed to bring them together as a group as they shared

experiences of feeling “judged as young mothers”. Group consensus about young motherhood and feeding in public moved the conversation to the sensitive topic of community judgement and their shared experience of feeling like public property as “teen mums”.

One constructed group (FG 18, mothers aged between 19–37) stood out as generating particularly rich and complex data because of the interactions that occurred between the younger mothers and the older and more educated women in the group. There was a young mother of two (Kayla, 20) in the group who was 16 years of age when she had her first child. At the time of the FG she was breastfeeding her second child, then aged 2 ½ yrs. Kayla’s mother (40) was also present in the room, and although she did not actively participate in the group her presence contributed to its functioning. In the following excerpt, Kayla shares some of her experiences of being a breastfeeding teenage mother:

(Q) Do you feel that you could go to anyone for support?

Well, because I was suffering depression and I didn’t understand it properly at the time, I just really had no idea. I didn’t understand it. I needed someone around me that did understand and because I didn’t it made it so much worse. It was very difficult. (Kayla)

And you’d only moved back here from the mainland as well, so you didn’t really have connections, did you? (Kayla’s mother, 40)

No. And you ...

And I was in hospital. (Kayla’s mother)

Yeah. Mum had leukaemia at the time. So yeah, it was really quite horrible. And plus the blisters as well and every time she would wake up for a feed I used to look at her, like “oh, not again”, you know. (Kayla, 20)

(Q) Were you on your own, or did you have your partner with you?

I had my partner, but he was an awful, awful partner at the time. So I didn't have proper support basically. If I had have had proper support, I think I would have been OK. I sort of just needed someone to say, you know, "come on Kayla, get back up. You can do it, you know", not "I can do it better than you because you're still a child, so give the baby over to me and this is how we're going to do it" sort of thing. (Kayla, 20)

Kayla's story was very confronting for the other women in the group. All, were for the most part in supportive relationships with the father of their infants, and aged > 24 yrs. Kayla's honesty changed the level of discourse and allowed others to feel united as a group of mothers, and to freely share deeply-held secret feelings of isolation and vulnerability, and guilty thoughts on bottle/formula-feeding when breastfeeding was difficult in a predominantly breastfeeding group. Her lack of self-pity and apparent acceptance of her life situation were familiar to other young mothers in the group, and made it easier for them to discuss these aspects of their feeding experiences. Others in the group understood Kayla's feelings of personal failure when she began to formula feed her first baby instead of "doing what was best for him". This was clearly common ground for the mothers—irrespective of age or social place—and led many to talk about stopping breastfeeding and introducing infant formula.

As a researcher, I often felt like a "bystander" and "intruder" in many of the FGs, despite having three children of my own and many years working as a midwife and lactation consultant. Young mothers' narratives, in particular, caused me to feel that I was so ignorant about the realities of their worlds, and to question the usefulness of healthcare professionals. I made notes about how I had felt "left out", "isolated", and wanted to be part of this "secret club of motherhood" where everyone shared openly and vented with striking raw emotion. Essentially, I was privy to the mothers' private, and in some cases very intimate, personal experiences that they had not shared with anyone before. Some of these stories were very difficult to listen to, especially as an observer. Women detailed their feelings of personal, bodily, and social failure and shame at not being able to breastfeed. Not breastfeeding produced an ache that they couldn't fix, even through talking. They often vowed to try again with subsequent children, or cited remorse at "he's my last one so that's it, no more breastfeeding".

### Thematic Analysis of FGs

This section presents the four major thematic categories and their sub-themes as depicted in figure 6. The major thematic categories were developed using a theoretically-informed analytical framework derived from Pierre Bourdieu's theory of practice. These categories are:

- *Habitus*: Value
- *Field*: The social arena of Motherhood-Endurance
- *Capital*: Allofeeding
- *Practice*: Disjuncture

The excerpts used to illustrate the themes are sometimes presented for individual women and at other times in the form of excerpts from longer FG discussions that include multiple women. Pseudonyms and the mothers' ages at the time of the group are used for all direct and indirect quotes. It is outside the scope of the FG study to draw comparisons between social groups (e.g. social class), although at times references to characteristics such as age groups, socioeconomic groupings, or place are made to give context to the mothers' experiences.

Bourdieu's concepts are used to analyse the mothers' experiences. Four major Bourdieuan-derived themes (motherhood, value, allofeeding, and disjuncture) address the research questions: What are mother's experiences? And how do mothers make sense of cessation? Although Bourdieu's concepts and the themes are closely interrelated, they are described separately for clarity. Motherhood, value and allofeeding broadly address the first research question and detail the mother's experiences, beginning with the social arena of motherhood (*field*) where women endeavour to feed their children. Value explores the embodied *habitus*; the mother's preference to breastfeed and the doxic view that breast is best. Allofeeding describes the resources (*capital*) women used to negotiate breastfeeding and cessation.

Disjuncture specifically tackles the second research question of "how mothers make sense of cessation?", revealing that women are left with a form of grief that they cannot resolve.

As women did not refer directly to “exclusive breastfeeding” as a way of feeding their children, and instead talked generically about “breastfeeding” and “not breastfeeding and/or formula feeding”, this analysis describes the women’s experiences of and how they made sense of these feeding practices unless otherwise stated.

### **Major Theme One: *Field* – Motherhood as a Social Space**

Fields are contentious sites, classified by Bourdieu as social and/or symbolic institutions such as the family, art, science, or biomedical (Bourdieu, 1990b, pp. 66–68). Bourdieu suggested that the *field* (social spaces) be outlined first in sociological analyses because it is the vehicle an agent operates within. It is “where struggles take place” and, in my study, where the individual or group (mothers) attempt to deploy their currency (their *capital*) to negotiate the rules (Grenfell, 2008, pp. 67–88). Women in this study were feeding young children, and many were attempting to make sense of early cessation of breastfeeding within the social field of motherhood. The field of motherhood provides a structure where women occupy positions based on their age, feeding preference, *practices* (breast or bottle/formula) and the maternal *habitus*. Nearly all the women in the study took their place in the *field* of motherhood as “breastfeeders”, deciding “to breastfeed” during their pregnancy, and then setting out to “try and breastfeed” even if it was “just for a little bit longer”.

Fields do not exist in isolation. Motherhood sits in relation to other fields of power such as biomedical (health professionals, public health policies) consumer (marketing of infant formula, bottles, dummies, and expressing equipment) (O'Brien, Myles, & Pritchard, 2016; Ryan, Team, & Alexander, 2013; UNICEF, 2016), and personal that all indirectly affect the players and what they do. These sub-fields are depicted in Figure 6. The importance of the biomedical (health system) and consumer fields were evident through my analysis of the mothers’ experiences. However, the structure and functioning of these subfields is not explored in this thesis because the findings focus on motherhood itself as a “site of struggle” (Robbins, 2000b).

### **A place of struggle: where breast is best**

Motherhood is a complex “site of struggle”. It is a structured system of social positions where women struggle to feed their children and fit in with the dominant doxa; the “taken for granted belief” (Bourdieu, 1996) that breast is best. This provides a degree of social order for the mother, allowing her to understand the rules of the

metaphorical game; electing to breastfeed over formula, being a good mum, and that breastfeeding is natural and always best (Blum, 2000a; Grenfell, 2008, pp. 68–70). The field of motherhood is characterised by the ruling doxa (“breast is best”) that creates pressure for women to conform to the traditional ideologies of care and nurturing (Miller, 2007). This was evident in the way mothers across age and social spectrums orientated their feeding preferences to breastfeed “because it’s, well, just best for the baby” (Emma, 30), and many women “just never considered doing anything else”, stressing that after they had stopped exclusively breastfeeding “I just wanted to always breastfeed and I’m devastated that I can’t” (Mary, 30).

Motherhood houses an implicit rule that breast is best along with other dualistic rules (breastfeeding is normal/formula is bad, clean versus dirty, natural versus artificial) (Miller, 2007; Murcott, 1993). These taken-for-granted rules of motherhood act to either constrain or enable the conversion of the mothers’ capital, such as breast milk, lactating breast, and knowledge. For example, women felt empowered to state that it was “my right to breastfeed and I don’t care what people say”. In regards to their preference and desire to keep breastfeeding, women unwittingly cited the power of these implicit rules and how they guided their choices, repeating “breast is best”, “more natural way to feed”, and “doing what is right”. On the opposite side of the field was bottle and formula feeding, perceived as unnatural, dangerous, and veiled in conjecture. For many women, the unexpected use of infant formula was felt to be “as if I’m doing something wrong”, and “now I’m a bad mum”. Immediately, this pitched the “good mother – breaster” against the naughty mother – bottle/formula feeder”. The following quotes reveal the values (dispositions) underpinning both breast and formula feeding in the field. Kelly (28), and Emma (30), provide an outline of the structure (motherhood) in which they and others like them set out to breast feed and avoid formula:

I would not [formula feed] regardless, I mean even with all the . . . I didn’t really need to be told to breastfeed, like I didn’t need all the encouragement or the pushing in the posters that you see because that was something I was always going to do. (Kelly, 28)

I didn't even think twice about it [breastfeeding] it was just what was going to happen. It didn't occur to us [partner] that I would be formula feeding. I don't know why; it was just one of those things that is there. (Emma, 30)

The field of motherhood sends a strong message to women that breastfeeding is expected and that formula feeding is not first choice, and a practice to avoid. These beliefs/dispositions form the boundary of the field which mothers internalise. The field does not act in isolation, and takes on historical values and beliefs around what represents good and bad mothering.

I think, look, I'm not an expert but I think when so many people 5, 10 years ago maybe breastfeeding became . . . there were less people breastfeeding so I think the health centres, the hospitals and everyone had to push to get people back to breastfeeding [and] that it's been pushed so much that now it's pushed in a way that we feel guilty if we don't. So I mean it's not a bad thing that "breast is best" is pushed. I don't particularly like being made to feel guilty, but at the same time it's a good thing to have pushed I guess, so more people are breastfeeding, but yeah, if for whatever reason you can't, the feeling of guilt is probably not ideal. (Emma, 30)

It was interesting to note that the women in this study rarely questioned the influence of their own mothers' infant feeding practices and experiences, demonstrating the "unconscious internalisation of historical dispositions" (Bourdieu, 2001, p. 73). Participants tended to oscillate between the subjective and objective. They respond to the pressures generated by the larger health structures that breastfeeding is an important public health initiative, and they internalise the guilt they feel when they don't or can't meet the expectation. The knowledge of historical practices (resurgence of "breast is best") offers women some context for why breastfeeding is pushed so strongly in what otherwise appears to be a consumer and choice-saturated culture. The option (to either breast or formula feed) places breast and formula feeding as products in a consumer field, where posters and advertising in hospitals and clinics are used to restrict choice and legitimise the dominant doxa. Sarah (34) in the following quote from the same FG, as Emma's "unfortunately had to stop" breastfeeding at 3 months because of low milk supply, refers to the absence of information about infant formula milks:



There are no posters out there. In the hospital, you see all the posters of what you should do, and there are no posters saying “if you just happen to have to formula feed that’s okay”, there’s not a motivational poster that does that, it’s all about the most natural things. ... I don’t know what’s gone [on] with feeding in years gone by, but I was under the impression that maybe a lot of people had started bottle feeding, because even my Mum said to me, she asked what I was going to do and I said “I think I’m going to breastfeed,” and she said “yeah, because it really is a lot better” but she was saying it to me like she thought she was talking me around, and I don’t know why she assumed that I wouldn’t. Our mothers’ generation, at least my Mum’s generation, was encouraged to formula feed because there was this impression that formula was better, because I don’t think at that stage they knew enough about breast milk and the benefits of it. (Sarah, 34)

The colourful history of infant feeding underpins the production and reproduction of beliefs that clash with the expectations of the field of motherhood. Motherhood is a powerful structure that both constrains and empowers women in their choices and practices. It is also heavily shaped by the past history of “what women have done before” and what is expected from the female body (Blum, 2000c). This embodied “associated learning” orientates choices, providing women with know-how, or as Bourdieu (1990) states “a feel for the game” (Bourdieu, 1990b, p. 66–67). Importantly, there is no right or wrong. What is at stake in the field are positions (breast/formula) and the value of the capital in use. The use of the breast and conservation of the capital (milk) is thus an important part of mothers belonging to the field of motherhood.

Being a member of the field is not without problems. The struggle to continue to breastfeed and avoid formula is not a fair one. It takes place at the borders where other fields (biomedical and consumer) intersect with the field of motherhood (Bourdieu, 1990b). Participant comments about feeling anxiety and pressure to breastfeed, and the lack of “motivational posters” for formula, demonstrate that infant feeding is carefully micro-managed, and that formula and other options (bottle, dummies, expressing) are restrained by the regulations and policies of the biomedical field. This creates tension on the boundary of the field for mothers. Here we see the struggle over the valuable commodity: breastfeeding that maintains its status as best in all fields and sub fields. Overall, women interpreted this tension as a lack of

information and choice, but accepted it as part of the current rules of play. In the following passage Clare reflects on the place of formula. Her entry into the field of motherhood came during pregnancy, where she became aware of the relationship between breastfeeding and good mothering, and saw formula as being frowned upon:

For me, anyway, I knew all the benefits and everything and it's the best thing for him and natural and convenient and all that kind of thing, but I think there's also some part of me that had been listening for quite a while now during pregnancy and before about, you know, "breastfeeding is the thing to do", and "you should do this and that", so I had in my mind that bottle feeding is something that I should not do and that it was frowned upon, and that I'd be, you know, short-changing him, so there is an element of guilt if I go down the bottle path. (Clare, 36)

Mothers are not born into the field of motherhood, but inherit and acquire the traits (breast is best, natural, formula as bad), as "know-how" through their mothers, their own experience of pregnancy, and interactions with other fields such as biomedical and public health. Clare interpreted the rules as many other women did: breast is best and formula is frowned upon. Women did not elaborate on this but accepted the status quo. As historical and familial feeding practices, breastfeeding and formula feeding are both present in the field, but they have opposing social and moral meanings. Breast is equated with being a good mother and formula is now associated with doing something that is wrong:

There is a little bit of that now, definitely. That people are going to look at me a certain way, that I'm not as, I don't know, as good a mother, whatever, and that it's just something that shouldn't be done, kind of like unprotected sex shouldn't be done so if you do it it's a really weird kind of feeling. (Peta, 27)

It's almost just drilled, I felt like it was drilled into me that I thought it was wrong but couldn't really articulate why I shouldn't even contemplate that, so I'd rather deal with the pain and whatever than contemplate something [formula] that I felt like shouldn't be done. (Betty, 24)

### Endurance

As women set out to breastfeed they often endured physical, social, and personal strain. The sub-theme *endurance* relates to the struggle women undertake to avoid infant formula and to do what they perceive as their best for their children (breastfeed). The women's stories suggested that all women struggle to feed their young children, and for many it does not come "as naturally as I thought". For example, Fiona, a mother of two who had breastfed (not exclusively) both her children until they were 6 months' of age recalled that "you think it's just going to happen, that you will just pop the baby on, but breastfeeding is bloody hard work" (Fiona, 28).

Endurance also refers to the mothers' fortitude and resolution. Throughout the FG women cited a need to "keep going", to "get through it", to avoid formula "if I can" and breastfeed "just a little bit longer". As mothers and other agents in adjacent fields (i.e. health professionals) compete and struggle for the scarce resource (exclusive breastfeeding) the pressure to perform and endure intensifies. What is at stake in the struggle is the mother's identity as a "good mum" (a breastfeeding mother). The following quote from Elizabeth illustrates how many women in the study described breastfeeding as an endurance journey. Elizabeth experienced difficulties attaching her child at her breast, explaining "I just couldn't get it right", and described how she "had to bottle feed". Her words "I had to bottle feed" suggest a sense of disempowerment and disconnection from her body. She was also very self-conscious about feeding (breast or bottle) in public places "because of what others may think":

I just thought . . . I will feed and feed until the child doesn't want it any more. And I really had that stuck in my head, and so when I had a really, really tricky start with trying to get him to attach and I had to try to work it out with all the feeds and all that sort of stuff, and when you're really tired, it's hard work and a couple of times I had people say "why don't you just introduce a bottle?" and I thought, "OK, well, I've introduced a bottle, but I don't want it to be formula". I was just really, really anti-formula. I don't know why, because I guess lots of people [feed babies] with formula . . . but I just knew that breast was best and that's what I really wanted to do, to be able to give him the best start. (Elizabeth, 33)

Elizabeth's feelings of pressure to resolve her conflict and breastfeed at any cost were palpable. Her commitment "to feed and feed" was echoed in many other women's experiences and desires to persist with breastfeeding and to avoid formula. Elizabeth, like so many other women, experienced the unexpected reality of a "tricky start" and conflicting advice and pressure from competing fields to introduce a bottle. The struggle for and scarcity of the resource (exclusive breastfeeding) translated into an intense sense of pressure and anxiety. The influence of the biomedical field is evidenced in how Elizabeth spoke about the importance of nutrition for health, and the conflict this "knowledge" created for her as she endeavoured to avoid infant formula. It was clear that Elizabeth's reference to those "people" who use infant formula indicated that they belonged to another class taste (Bourdieu, 1984, pp. 186–188), and were opposing players and a potential threat in the motherhood field. As feeding practices, breastfeeding and infant formula are framed as antagonistic to each other:

Everybody before, when you're pregnant, only tells you all the good things about breastfeeding and why you should breastfeed but nobody actually, well, I didn't find anyone . . . talked about how hard and how painful it was going to be. And then the only advice I could get from people was "just keep going, just keep going, just keep going". (Harper, 29)

Conflict in the field comes from the unequal distribution of specific resources (Bourdieu, 1990). In the above quote, Harper expresses her frustration over the unequal spread of knowledge about the realities of breastfeeding. Women who experienced breastfeeding as hard and painful often spoke about being encouraged from the sidelines to keep going because "it gets better". Conversely, mothers also reported that strangers, family members, and health professionals often encouraged them to stop trying to feed and instead use formula or bottle-fed expressed breast milk. In the above quote, Harper expressed dissatisfaction about coaching and umpiring that she regarded as unhelpful and generating an internal conflict between reality and expectation. For most women in the study, external coaching about breastfeeding was perceived as emotional encouragement rather than the practical help and problem-solving they felt they required. Trying to do what was "right and natural" and then experiencing pain, being judged by onlookers, and receiving "looks from strangers"

did not make sense to the mothers. Nor did being encouraged to breastfeed and then being told “you don’t have to do this, you can use formula”.

Like nearly all the other women in the study, before her baby was born Harper had assumed that she would breastfeed her baby. She was then affronted by how hard it actually was to do so. Harper kept going, through what she described as excruciating pain, using nipple shields, telling us: “I’d do anything just to make sure he got some of my milk.” The struggle to breastfeed (practice) takes place in a framework of relationships between formula and breast which are always in conflict. Participants described finding it difficult to negotiate the changeability of breastfeeding, in particular the uncertainties about whether they were doing it right, if they had enough milk, or if the baby was getting enough, should it be this hard and hurt? Moreover, women described feeling cheated by a perceived lack of honesty about what breastfeeding looked and felt like in reality. Many participants stated that prior to having their own baby they had never seen anyone feeding.

For a small number of women, enduring and “pushing through” feeding problems (such as bleeding and cracked nipples, and pain) was worth it because once established, breastfeeding carried practical benefits:

It’s funny, though, because if you push through that it ends up being so much easier because you don’t have to think about packing bottles, keeping them warm when you go places, because it’s all there. (Ava, 26)

Other women described in detail how they felt regret about enduring for so long because it created troubles for their baby and/or relationship. For example, Abby described how she endured bleeding and cracked, flaking nipples, multiple bouts of mastitis, and uncertainty about “how much he was really getting” and then feeling guilty about not giving her baby enough food and experiencing tension with her partner:

because the baby was screaming, just screaming all the time. I realised he was just hungry, in the end Peter [husband] just fed him . . . I had been starving him by trying to do the right thing and breastfeed (Abby, 31).

The perception that “you just need persistence” to breastfeed was associated with an assumption that self-sacrifice and maternal martyrdom were necessary in order to be a good mother. However, persistence in the face of ongoing breastfeeding problems produced anxiety. The “breast is best”, “good mother”, and “keep going” ideology appeared to create a pressure-cooker effect where the mothers pushed themselves to the edge until they could not continue any longer. They then felt overwhelmed with remorse and guilt because they could no longer endure the pain, or make enough milk to feed their children:

I was just going to say, I’m told this is my last child, or anyway it looks like there’s no decisions to have another child, so I tend to think weaning is not as easy to do to commit to and to start to think about not breastfeeding anymore. We’re still happily breastfeeding but it is very draining for me, like I find it’s hard to keep up my calories intake and fluid intake to have enough. When he pops in a few extra feeds, which he is doing for some reason at the moment, what it takes for me to generate that extra meal, I feel it. I feel worn down. But it still is an easier method than a lot of other things. (Thalia, 37)

The belief that persistence and endurance were necessary to breastfeed may have helped women to continue for “a little longer”. However, it did not prevent women from using infant formula milks. Thalia explained to us earlier that she had used formula “every now and again” because she was exhausted and could not express enough milk. The unexpected physical demands of making enough milk exacerbated the feeling of needing to keep going to do the right thing. The endurance race was characterised by mothers pushing their bodies to the limit and multi-tasking, including enduring pain, tri-breastfeeding (three methods of feeding; expressing and using bottles for expressed breast milk while also breastfeeding at the breast), enduring sleep deprivation, and using infant formula. Women struggled against themselves, and interestingly against their bodies’ apparent inability to produce milk. They described conflict between the rules of the game: the social expectation to breastfeed and “breast is always best”, that infant formula is bad against their need to use infant formula. Women’s persistence, and their desire to keep going through physical or social adversity, generates a dynamic social space of motherhood where there is a constant tension to perform and struggle for the control of, and access to, exclusive

breastfeeding. For the majority women in this study, this produced and reproduced a social and internal crisis:

It feels like . . . we don't have a sense of community anymore in our lives. We don't have a community of women around you who are passing on the knowledge and the bits and pieces. We're so reliant on policies and information and that's what gets handed down to us, and because it constantly keeps changing, then we become . . . we'll be defunct one day for our kids in some respect because the policies have changed. If it's not breastfeeding, it's solids . . . we can't win as mothers. (Annabel, 33)

Contemporary western motherhood is not made up only of women. It seems to encompass many more players, including health professionals, fathers, strangers, and the general public. This may help to explain why so many women felt a lack of agency and disconnected from their bodies (breasts, and milk) during their endurance efforts to breastfeed their children. Having multiple players, coaches, and rules may confuse mothers and dilute their sense of control over resources, including their milk, body, and agency.

Motherhood as a social space enables women and others (health professionals, fathers, consumer groups) who have vested interests to group together, providing some degree of solidarity. However, it was clear that the field of motherhood was dichotomised by the prevailing belief that breast is best and formula is wrong. The mothers' accounts of their endurance reflects not a lack of educational knowledge, know-how, or ability, but reduced autonomy and agency. Somehow, the women had stopped trusting themselves and their bodies, while instead trusting the heightened commercial value attached to the belief that breast is always best, and assumed that this was enough. This led them to keep going, reassuring themselves by reiterating "I just thought it would get better—it's natural". Believing in breastfeeding enables mothers to fit into the field and fulfil the requirements of the "good mother, a breastfeeding mother", citing, as Bec did "you just need to keep going and get through it, it's what you do as a mother" (Bec, 31). The taken-for-granted beliefs and intense value of breastfeeding as a normative maternal practice legitimises the dispositions of the maternal habitus –

natural, best, maternal, self-sacrifice, endurance, joy, closeness, but also tiredness, pain, cracked nipples, and concerns about supply.

### **Major Theme Two: Habitus – Value**

This major thematic category uses the concepts of habitus, doxa, and value to explore the importance women placed on their intense preference to breastfeed, and their belief that breastfeeding is “more natural”. Habitus refers to a system of dispositions (ideas, values preference, and tastes). Bourdieu describes habitus as “a durable, transposable system” deriving from a person’s past that shapes their tastes and preferences. Habitus is a type of “incorporated history” that becomes second nature, “the operating presence of the whole past of which it is a product” (Bourdieu, 1990b, p. 94). Doxa refers to “shared beliefs” that are taken for granted, not talked about, not questioned, because they lie deep within the social fabric of the social world (Grenfell, 2008, p. 121). The idea of *value* is located within the maternal habitus. Women enter the field of motherhood and acquire the rules of this social space during pregnancy, where they learn the taken-for-granted assumption (doxa) that “breast is best”. The field of motherhood is shaped by this doxa (Knaak, 2010; Miller, 2007) and mutually reinforced through the dispositions of the maternal habitus. The dispositions of the maternal habitus enable the mother to “fit in” (Bourdieu, 1977, p. 245).

#### **Doxic view: breast is best**

Through the lens of doxa, the participants’ understanding that breastfeeding is “natural” can be recognised as a socially-shared belief perceived as “just the way things are”. It is essentially taken for granted that all women should and will breastfeed in the social world of motherhood, and also in the biomedical field of health. In the study sample, 92% of all mothers had committed to breastfeed prior to birth. For all of the women, even the small percentage who had planned to bottle-feed, breastfeeding was viewed as “best”, because it was “the best start they can have”. When we asked mothers to explain, they appeared perplexed:

Well, I’m obviously breastfeeding and picked it because of everything that I’ve read about it being healthy, economical, the bonding, the portability, “have boob, will travel” and it will stay warm and clean, and all those sorts of things, so it just seemed like the natural thing to do. (Ella, 35)



Although systematically analysing the differences between socioeconomic advantaged and disadvantaged women was outside the scope of this study, it was evident that women from different socioeconomic backgrounds appeared to share the *same* belief that breastfeeding was “good” because it was “more natural”. This is the doxic view, the taken-for-granted assumption that underpins the social and personal expectation and perspective that breast is always best. This shared belief dominated the landscape of conversation, legitimating and reinforcing the intense value women placed on their practice. What mothers perceived breastfeeding to be was not, however, straightforward. Women used the generic term *breastfeeding* to describe feeding from the breast, but did not spontaneously refer to *exclusive breastfeeding* as a way to feed their children.

### ***Exclusivity and doxic values***

Women in the study did not differentiate between “partial” and “any” breastfeeding, and made no reference to “exclusivity” as a type of breastfeeding<sup>2</sup>. The women did not spontaneously use the term or discuss exclusive breastfeeding as a distinct way to feed their children. The notion of “exclusivity” was rarely, if at all, talked about by the women without prompting from the researcher/facilitator of the groups. When completing the questionnaire and during the FGs women often asked “what does exclusive mean . . . isn’t that just breastfeeding?” Prompts such as “how does exclusive breastfeeding fit in?” or “what are your thoughts about exclusive breastfeeding?” produced responses such as “isn’t it recommended that you feed them [babies] to 6 months?”

The label of “exclusive” did not appear to add further value to the act of or preference for breastfeeding, or change their view of bottle feeding. Similarly, infant formula feeding was referred to as “bottle feeding” or “formula”. Mothers in the study principally set out to breastfeed and exclusive breastfeeding was not consciously experienced. It held little meaning for them as a historical or cultural infant feeding method. Exclusive breastfeeding thus existed as a public health recommendation, and a category embedded and hidden in the common terms to breastfeed, breastfeeding, and best.

---

<sup>2</sup> In light of this finding, for the remainder of the thesis the term *breastfeeding* will be used, *exclusive breastfeeding* will only be used if that is what the mother actually referred to, or if it is important to differentiate between breastfeeding and exclusivity.

Consequently, the mothers' discourse around infant feeding and breastfeeding centred on breast milk being natural and nutritionally superior. Women expected to just breastfeed, stating "I don't know where that comes from, but that's the kind of expectation you have" (Chelsea, 36). They did not question their desire, but recognised the practice as important to them because "it's just more natural" and "it's what we are made to do" (Molly, 28). In response to questions about how participants made their feeding decisions, Gen (18), like so many other women, simply retorted that "the breast is best". Katherine (26) added "I just pretty much kind of thought that's just the best thing for the baby, and that's just what you've got to do". Neither woman felt a need to explain any further, although, like many other mothers in the study, they had ceased breastfeeding after the first 2–3 weeks. The doxa as "intuitive knowledge" contributes to the reproduction of the often-repeated "breast is best" slogan, and helps to explain the women's unquestioning penchant to breastfeed. This fundamental belief did not need to be further explained by Gen or the many other women who espoused "breast is best" because it is deeply rooted in the field of motherhood as a taken-for-granted tradition (Bourdieu, 1990b).

This structure (doxa) was clearly reinforced and reproduced through external pressures and power structures such as health professionals (midwives, lactation consultants), who were perceived by the women to be the principal advocates of "breast is best" and instruction pushing women to "breastfeed, breastfeed, breastfeed" (Celia, 28), and to achieve the "right way" to breastfeed through correct attachment and positioning. The message "breast is best" was observed by the mothers to be a powerful presence in other fields, through posters on hospital and health clinic walls, magazines, Google help sites, pamphlets, and on tins of formula. As one young mother lamented: "Yeah, even on the formula tin 'breast is best'—it's everywhere you look, you can't get away from it . . . makes you feel so bad" (Eden, 20). Although women recognised and received these messages as "pressure" – as Eden said: "Yeah, it's breast, breast, breast, you must breastfeed" – they continued to espouse and accept the socially-dominant view that "to breastfeed" was best. It was clearly internalised as expected because "that's what we are made to do as women" and "that's what breasts are for".

When the women were asked about their feeding choice prior to the birth of their current infant or child, women across demographics and in each group stated “to just breastfeed”. As stated earlier, mothers did not spontaneously use the term or refer to exclusive breastfeeding, instead they referred to “I tried to breastfeed”, or “I just wanted to breastfeed”. Many of the women pragmatically repeated their feeding trajectory, beginning with breastfeeding:

I initially started with breastfeeding, but I had the worst delivery, and I got problems, wasn't able to breastfeed her, so I put her on formula, and now she's on solids and bottles. (Clare, 36)

Clare's succinct summary of her feeding experience revealed a common feeding pattern involving five steps. Overall, mothers began breastfeeding, and then experienced some or all of the following trajectory: interaction with professionals and experts in the hospital setting where they experienced a bad delivery, felt under pressure, received conflicting advice or support, experienced sore nipples, low milk support, delayed milk coming in, or mastitis, weren't able to breastfeed, and ultimately used infant formula milks. This pattern usually occurred through the first two months after birth. From the narratives it was uncommon for women to talk of just breastfeeding without repeating all or part of the trajectory. Clearly, mothers' expectation of what “to breastfeed” actually looked like in practice did not match what actually occurred.

The shared beliefs of the doxa created an objective structure for mothers where they could feel safe and satisfied that they were at least “doing what is best for my baby”. In this context, women also saw and classified themselves as good mothers striving to give and provide for their children the “best nutrition” by breastfeeding or preferring to at least “give it a go and try”. The “give it a go”, “try everything to make it work” approach enabled many of the mothers to enter the field of motherhood as legitimate and “good mums”. For example, Chris (29), stated “I didn't really want to breastfeed, but felt that it was the best thing for her, so . . .”. For some mothers, like Caitlin (32), the pervasive values around breastfeeding were irritating:

And like I said before, [in] information about bottle fed formula and stuff, every second sentence is “yes, you can bottle feed, but it’s better to breastfeed. You can choose this bottle or this formula, but it’s better to breast feed”. Then it’s like . . . “please note, we recommend breastfeeding”. (Caitlin, 32)

Women like Caitlin, who had “always intended to bottle-feed” and were irritated by the “breast is best” campaigns, often ended up giving breastfeeding “a go” after birth. This demonstrates the power of the social value attached to breastfeeding as the best nutrition for the child, in that it can override the mothers’ own personal inclinations. For women like Caitlin, it changed how she initially fed her child but had little impact on the duration of her breastfeeding. Towards the end of the FG, Caitlin stated that “I was surprised, because I actually enjoyed it” but also that it was the pressure of “you must breastfeed” and the experience of “lots of problems” that limited the duration of her breastfeeding experience.

Trying to breastfeed helped many women to rationalise cessation. It gave them symbolic capital in the form of a social “credit rating” as “breastfeeding mum”. They often remorsefully ended their explanation of how they began and then “had to” stop with “at least I tried it”, and “I gave it a go”, or “she got the first 2 weeks of me”. In this context, mothers appeared to be consumers of a product (breastfeeding) that offered value to their lives as mothers and to their children’s wellbeing. “Giving it a go” entitled the mother to a place in the field (Grenfell, 2008, p. 122):

I tried to breastfeed cause it’s best for him . . . but I’m happy to bottle, I sort of wish I’d just expressed now. (Becky, 20)

Yeah, they need to have classes that aren’t just breastfeeding, it needs to include express feeding, and formula feeding. (Jess, 20)

### **Maternal Habitus: To Breastfeed**

Maternal habitus refers to the beliefs and practices that underpin the field of motherhood (good, best, natural, bond, maternal, breast-feeder). The dispositions are acquired through the experience of “living in society” through pregnancy, attempting to breastfeed, and formula feeding. Bourdieu saw habitus as “generating unconscious

practices” because people are rarely aware that their preferences, and even the ways they unconsciously use their bodies, are being shaped by habitus. While habitus is usually conceptualised as enduring, it is also understood to be dynamic and generative rather than fixed or stable. Individual habitus is creative, it changes as individuals engage with other people, institutions, situations, and fields. There are many different ways that individuals can improvise, and there are always choices available.

Although there are numerous dispositions identified from the analysis (appendix 12) “to breastfeed” and “closeness” were consistent across the FGs and were identified as the key dispositions of the maternal habitus. These appeared to be socially and historically acquired (Bourdieu, 1990), and reproduced through gender, biology, didactic health-based antenatal classes, health promotional campaigns, biomedical hospital practices, and policies such as the “Ten Steps”, and the mothers’ past experiences of observing other women feed children using either breast or bottles. As a “set of dispositions” they are deeply rooted in the maternal body and tightly bound with the mothers’ maternal identity, particularly of “being of a good mum”. Bourdieu (1990) made it clear that the habitus (and its dispositions) do not determine behaviour or choices. These traits (to breastfeed and closeness) predisposed the mother to act in accordance with the structure and doxa of motherhood, where breast is best. (Bourdieu, 1990b, pp. 52–54), giving rise to the high proportion of mothers intending to and initiating breastfeeding, and generally citing the benefits and worth of breastfeeding and breast milk.

### **To breastfeed**

We asked all 108 women at the beginning of each FG how they were feeding their baby today. Irrespective of the current age of their child, all women initially responded by linking to the birth as a starting point, and then divided their feeding practices up into two mutually exclusive methods. For example, Kim (18) stated clearly “I just wanted to breastfeed”, or “we’re now bottle/formula because it didn’t work out” Their responses were restrained at first and always in the context of “breast is best”, and infused with passive regret. Scarlet (37), pondered: “I guess I expected something different, like it would just happen. You just don’t realise how difficult [breastfeeding] is. I just wanted to breastfeed.”

The uncompromising personal commitment to breastfeed is evidence of the women's taken-for-granted assumption that breastfeeding is "natural", and thus reproduces an unconscious belief—and for many an unfulfilled belief—in their maternal bodies' abilities, that in turn generates the longing for breastfeeding that women displayed when breastfeeding does not happen. Consequently, women in the study described how they set out in pursuit of their conscious goal of to "just breastfeed", revealing the doxic view of breast is best and the "practical logic" of the maternal habitus (and the embodied dispositions) that generate strategic practices that unfold and are played out over time within the social space of motherhood (Bourdieu, 1990).

Study participants who were now bottle or formula feeding often openly voiced their yearning to breastfeed. They were for the most part unaware of why they felt so compelled to breastfeed, but firmly believed in the practice as the right thing to do for their child.

Women in the study experienced the shared preference to breastfeed through the shared maternal habitus. As a structure, it was greater than the sum of what the mothers said or experienced (breast or formula feeding, expressing breast milk, pain, low milk supply, anxiety, joy, relief); it was the "structuring structure of structures" that gives meaning to the field of motherhood (Robbins, 2000b). In the following quote from Thalia, who was one of the relatively few participants breastfeeding at the time of the study, we see the imprint of the habitus on her beliefs and how she values the use of her body and self as nurturer and provider. She had explained earlier that her child had been "quite sick", so she felt that breastfeeding was "so important to keep him out of hospital". She had also declared that she had "been forced" to use formula in hospital by midwives but was now "just breastfeeding":

I've been very happy with it. I always wanted to breastfeed like my mum did, and I think all my aunties and stuff did as well, and things like that. Recently found out one of my aunties, and she's never let on about it, but she breastfed her last child until he was four because she didn't want to give up because she knew it was the last child. And I always planned to breastfeed for at least six months, but probably a year, and I've kept going for as long as I can. (Thalia, 37)

The quest to breastfeed represents the reproduction of the familial and evolutionary history of the maternal body (Bourdieu, 1977, pp. 66–77). It is the key disposition of the maternal habitus, generating preferences. As the quote above suggests, the mothers' past and present familial experiences around feeding infants and children and their bodies are internalised and taken for granted. These mutually reinforce the dominant doxa that “breast is best” and dispositions of the maternal habitus. In the conversation here, Katie and Molly reflect on where the notion of “to breastfed” comes from:

Q. What are your thoughts on breastfeeding and stopping?

I think it's in-built to women—it was to me—that everyone said to me before, when I was pregnant, “are you going to breastfeed”?

And I said, “yeah, if I can.” (Katie, 35)

You never think that you won't. (Molly, 28)

It was like the world was going to end [when she could not breastfeed]. (Katie)

It was built in you – somewhere in your genes. (Molly)

It is women's God-given right to do it – that's what you have to do for your child. (Caroline 41)

And when you can't, it's so devastating. (Molly)

The quotes demonstrate the historically-engendered traits of the maternal habitus where breastfeeding—to feed at the breast—is interwoven with social and historical norms of good mothering (Blum, 2000a; Miller, 2007). The women's intense desire to nurture the dependent child, to perform what is “built in”, and thus be a “good mother”, is deeply inscribed on the mothers' body, and played out through the conscious preference to breastfeed. As the quotes suggest, this did not appear to be questioned or an issue for women, and in one case welcomed as a “God-given right”.

Bourdieu (1977, p. 55), refers to this as a “*fait accompli*”, evidence of the reproduction of the embodied habitus (Bourdieu, 1977).

The concept of habitus helps to reveal how the maternal traits (to breastfeed, best, nurturing, good, bonding) are historically embodied (Bourdieu, 1990b). They are expected from the maternal body (Blum, 2000c; Shaw, 2004), and mutually reinforced through the ruling doxa, creating a collective category, a class of mothers who breastfeed and are natural mothers. This, in turn, places pressure on women to perform as good mothers and fit in with the structure, to their predetermined “God-given right”. Women in the study frequently alluded to their desire to be a good mother and feeling devastated, “naughty”, and a bad mother because they “now had to bottle feed”.

The mothers’ reflections on their capacity to breastfeed, their sense of social right in the practice, and then the sense of threat of stopping breastfeeding, reveal how deep the social and personal expectation to breastfeed is. The mothers’ preferences perhaps went far beyond the structural deterministic power generated by public health “breast is best” campaigns, that women in this study appeared to accept as rhetoric (Blum, 2000a), akin to background noise in the field. For the study participants, a mothers’ preference to breastfeed represented a deeply personal and embodied longing.

What the concept of habitus helps to make clearer is that this longing to breastfeed, to bond with the child through breastfeeding, is generated through historical and familial experiences of being a woman, mothering, feeding, and the associated conditioning experiences (Bourdieu & Wacquant, 1992, p. 133). According to the mothers’ accounts, these experiences were gained through antenatal education, books, friends, and family. The traits reproduced are durable (Grenfell, 2008), meaning they travel with the mother and help to underpin her preferences. It is not surprising, then, that the vast majority of the women preferred to breastfeed, and valued breast milk above all other options, even when formula feeding. The mothers’ practices follow a “practical fuzzy logic” and this helps to resist, as Bourdieu & Wacquant (1992) suggest, searching the (maternal) habitus for more logic than it actually holds; the logic of practice is logical up to the point where to be logical would cease being practical (Bourdieu & Wacquant, 1992, pp. 22–24).



**The value of closeness**

Women in each group spoke frequently of the “closeness” that breastfeeding facilitated between their children and themselves. This intimacy was likened to a special gift that they received unexpectedly and mourned when it was lost. In the following excerpt, Amanda reflects on her experience of using a bottle to feed a breast-fed child and her sense of loss generated through the use of bottles, and feelings of being replaced:

It's your milk in there [bottle] and stuff but it's just, I don't know. I don't think you can put it into words really because you just don't have that, I guess it's that closeness, that you're missing out on, that precious little time that you have where they're feeding and they can look at you and when someone else is doing it it's like “well, no, that's my little thing with them” I think, and it's that sort of “someone else is taking over that role” slightly, I think. (Amanda, 30)

Mothers' responses to the prompt “what have you had enjoyed about breastfeeding?” were dominated by talk about deep bonds and the feeling of closeness when breastfeeding. “I love the bond, the snuggles; my daughter is not so snugly so it's the only time I get proper cuddles” (Deb, 29). Women often mentioned that their feelings of intimacy and closeness were unexpected but highly valued. They valued these two traits above everything else associated with breastfeeding, even nutrition. Being able to breastfeed was believed to generate a “bond with your baby that no one else understands” (Sally, 26). Many talked of losing this bond or worrying that they would lose the bond when they “had to stop”, or were threatened with stopping due to problems. In the following excerpt, Kayla (20) describes her desire to continue breastfeeding her second child “for as long as I can” because of the bond it generates with her child. For Kayla, the value attached to closeness motivated her to breastfeed her subsequent child:

I think as well that I'm trying to keep that closeness as well, because I didn't have it with my first child, and now I've got it with Benjamin I don't want to let go of it. I want to keep it for as long as I can.

Q. Are you back at school now?

Yeah. Because I feel really sad that I'm giving it up. And like I kind of don't want to give up that night feed because I like the little cuddles and stuff. And even though I pick him up and cuddle him a lot now, I love the relationship bit side of it. (Kayla, 20)

It was only after experiencing breastfeeding that women talked of “closeness” and of missing that feeling when they stopped or used bottles. The “closeness” that women felt when breastfeeding—even if they breastfed only for a short time—was a persistent theme when women talked about using formula or bottle feeding instead of breastfeeding:

I felt like I'm missing out, missing that closeness. (Cosima, 26)

Yeah, like there's a big hole. (Gemma, 36)

Yeah, it's the closeness. (Pam, 30)

The physicality of feeding at the breast appeared to have left an invisible mark on the mother, connecting her to her child. This “tattooing”, or imprinting, of dispositions on the body reflects the generative and embodied nature of the habitus. Women verbalised this embodiment as closeness. Closeness thus represents an understanding between the mother and her child that “no one else could enter into unless you've done it” (Cosima, 26). Feeding directly from the breast generated an intense physical and emotional bond, leading to the intimacy experienced by the women. For many women this “forgotten embodied history” (Bourdieu, 1990b) was unexpected and took them by surprise. Elizabeth (33), explained how she had found feeding from the breast difficult due to sore nipples: “I really struggled with breastfeeding . . . but it's the closeness that I enjoyed most.” Others reflected with pleasure on bonding with their children during breastfeeding, irrespective of the duration of breastfeeding:

The closeness, that bond, knowing that you are together, early on knowing that you were providing just that sole nourishment for that baby, like I was . . . basically he is getting everything from me really, really helped I think and just—yeah. (Elizabeth, 33)

Elizabeth's experience reveals how complex the breastfeeding process is for women, illustrating that it is a reciprocal process that includes nourishment, bonding, safety, and nurturing. For most mothers, the "breast is best" value is an abstract marketing concept at the outset of feeding. It was the closeness that "personalised" breast milk and breastfeeding, and heightened their relationship with their child. The physical closeness gave their preference "to breastfeed" a tangible meaning. Above the value of "natural" breastfeeding—to feed from the breast—was consciously experienced and valued for its ability to bond the mother and child together. This can also be understood as a form of positive capital: a resource that generates reward for both the mother and child through an exchange process. The next two thematic categories focus on the forms of capital that mothers used during breastfeeding.

### **Major Theme Three: Capital – Allofeeding**

Bourdieu's concept of *capital* can be employed to explore how mothers exchange their resources during their struggle to breastfeed and avoid formula within the field of motherhood. Bourdieu referred to three principal types of capital (among others): economic consumables (money, formula milks, bottles), cultural-physical (bodily characteristics and functions, education levels, knowledge), and social (networks, family, fathers) (Bourdieu, 1984, 1990b).

The exchange of capital, either in a positive or negative way, is where the cooperative workings of Bourdieu's three concepts are evidenced. The value of the capital is related to the characteristics of maternal habitus and field. Duplication and mutations exist, for example milk and lactating can be viewed as both resources and inherited dispositions of the maternal habitus. The common plight of "not enough breast milk" generates negative capital in the forms of emotional distress, and maternal anxiety. Similarly, using breast milk—either expressed or directly feeding from the breasts—is exchanged for personal, social, or organisational profit (good mothering, self-esteem, health of the baby, hospital accreditation). The worth of a resource is thus mutually reinforced and reproduced through the habitus.

Capital in its many forms is the "energy" that drives the field of power (Bourdieu, 1990, p. 83). For example, the mothers' physical ability to lactate and preference to breastfeed are embodied as cultural and physical capital and give her know-how, and

the right to be in a position in the field as a “breastfeeder”. Capital in its symbolic (generating status) or material forms (money, education, breast milk) represents objective and subjective resources that are available within the field of motherhood.

This thematic category uses the concept of capital to explore the practice of *allofeeding*. Allofeeding refers to “other-feeding”, the non-maternal resources (forms of capital) that mothers spoke about and use to provide nutrients to the dependent child. Importantly, allofeeding does not replace the mother but facilitates and supports her feeding of the child. It is essentially where the mother tenders out the role of the primary feeder to a “kin” or other form of resources-capital. Infant formula milk is not a form of allofeeding because it *replaces* the mother, her milk, and breast. The mothers’ experiences of formula feeding are explored under the final major thematic category of disjuncture.

### **Allofeeding**

The practice of allofeeding is a form of capital exchange (breasts, milk, nipples, fathers, others, bottles), that mothers have available as they negotiate cessation and breast and formula feeding. Allofeeding can be understood with the broader concept of allomothering meaning the shared provisioning and care of the young. Anthropologist Blaffer Hrdy (2009), describes it as:

They [infants] have available to them [the mothers’] entire social world. The mother is the principal caretaker . . . suckling is frequent and often but by no means always on demand. Without allomothering we would not have a human race. (Blaffer Hrdy, 2009, p. 75–76)

Allofeeding methods discussed by mothers in this study included bottles, teats, milk, their bodies, experts, and family members. The methods can be broadly classified into two groups: non-maternal tools, and others which included peer and or kin support persons. Allofeeding does not replace the mother but facilitates an exchange of “capital” offering relief or support to the mother during the process of feeding. This is understood as “symbolic capital”, the successful use of capital that enables mothers to exchange their capital to enhance or benefit their position in the field (Bourdieu, 1990b, p. 122). It is essentially where the mother tenders out her role as the primary

feeder (Blaffer Hrdy, 2009), and translates her bodily capital to another form of capital, i.e. expressing breast milk to enable the father to bottle feed.

Women used or attempted to employ allofeeding to negotiate feeding their children. When the women were asked “what/who helps or doesn’t help?”, the vast majority of accounts evidenced the use of others (namely fathers/partners, and to a lesser degree “kin”—sisters, grandmothers and female friends or other mothers). Second to these were mechanistic tools such as dummies, expressing, bottles, and teats. As forms of capital, they were felt to be “essential” and “necessary” resources, employed as either one-offs—“I just tried the dummy to see if it would help settle him”—or to resolve feeding problems such as regular expressing to increase milk supply.

Mothers were adaptive and creative in their use of allofeeding, tailoring who and what they had within the field of motherhood or consumption (bottles, dummies, teats, and formula) as resources to suit their particular situation. For example, Clare used a variety of allofeeding tools to support her ability to breastfeed her twins:

Rachael, with her breastfeeding she would want to feed some days all day, sometimes use my breast like a dummy, and sometimes you needed a little break from it but she would just want to be on it all the time, so I put her on the dummy at three or four months, just to give myself a break. I just breast-fed Rachael for three or four months and Caitlyn the same, three or four months. With the twins they came at 35 weeks so they were tube-fed for the first three or four weeks . . . I breast-fed them. He’d latch on and have a good feed, no, he would have a feed and hop off, she’d get on and want to be on for ages, and then he would be ready for his next feed. I tried to breastfeed the both of them together but that was pretty hard, one needed help latching on and the other one would latch on alright but you needed one hand pretty much to latch the other one on. It was hard getting up, you’d have to express, I was expressing to start off with, expressing so you’d be up all the time. I had the dilemma: do I continue to breastfeed or bottle-feed because I didn’t want to not breastfeed, because it’s not like I can change my mind after they’re older, so I wanted to at least give it a go for the twins. (Claire, 21)

The physical and emotional demands of being “the only one who can feed” the child and producing “enough milk” often placed a great deal of strain on mothers. They

often spoke about what they perceived as their lack of freedom when breastfeeding, and the importance of being able to gain some relief from the constant demands of feeding:

I haven't left him for any more than an hour since he was born. (Katie, 35)

They're constantly attached to you. (Xanthe, 26)

Yeah, I'm just exhausted I'm with her 24/7. (Jennifer, 26)

Being “stuck with him” and “constantly attached” does not reflect a lack of enjoyment of breastfeeding, or dilute the value of breastfeeding within the field. It suggests a need to share feeding duties in some way in order to continue breastfeeding. Women described feeling conflicted because they wanted to “do it all” and but they also needed to “share the load” (Blum, 2000a). In the current social world of motherhood, sharing the [breast] feeding with others contradicts what is perceived as the “good mother”, i.e. a mother who is available to her baby at all times.

Mothers expect themselves—and are expected by others—to breastfeed on demand. Feeding on demand seems to symbolise being a “good mother” who sacrifices herself to meet all the needs of the child (Miller, 2007). These normative values and beliefs are part of the structure of motherhood, and attach value to bodily capital such as breast milk, and the lactating breast. As such, it is not surprising that these sentiments were a persistent undercurrent during FG conversations. Many mothers stated that they “loved breastfeeding” but “couldn't wait to stop”. They then wrestled with “regret” and “guilt” because they had shared this feeling, for example ‘oh, God, now I feel like a bad mother’ or “I had no choice to use formula”. Statements such as feeling “sucked dry”, “constantly tired”, losing weight, and feeling “overwhelmed” when talking about breastfeeding and expressing breast milk for bottle feeding were common. In the following quotes, Paige and Lilly from FG3 refer to the relentless demands and struggle of motherhood, and the high stakes of feeding their young children. Paige was one of the few women who reported that she was exclusively breastfeeding at the time of the FG, although she had used formula during her hospital stay after birth:

Your point before, and I made earlier when you weren't here, about if there was anything that I disliked about it [breastfeeding] was the fact that I can't leave her, I can't go out without her. I'm constantly attached to her 24/7. I'm sure there'd be some women that would stop breastfeeding to get their freedom back. There certainly have been times when I've fantasised about the idea of giving her a bottle just so I can sleep in, so someone else can feed her. (Paige, 34)

Absolutely. But again you have those feelings of guilt even having those thoughts, I'm sure, because that again is just driven into you that we as mothers should be doting mothers, and be there for our children 24/7. (Lilly, 36)

It's very hard to feel comfortable having "me" time. (Paige, 34)

Feelings of "sheer exhaustion", feeling drained, and "trapped", led some mothers to "fantasise about using the bottle" as a form of allofeeding to generate what they described as "freedom", and to conserve energy. Both Paige and Lilly had previously "admitted" to temporarily using formula to support infant weight gain, or to get them through a difficult feeding time soon after birth. The mothers' struggle to convert and rationalise their need to use others to support them to breastfeed reflects the devaluing of allofeeding (fathers, bottles, others) in the field of motherhood. The delay in translating capital and mobilising others to provide a relief or support resonated with other women in the study, who also talked of their weariness at being constantly available and the importance of getting help:

I think it's a good idea to sort of seek the support of other people, like my sister is also really supportive and Mum's really supportive, all that kind of thing so just people telling you, you can feel a bit puffed up because you look after a baby 24/7 and [after all], the baby doesn't at the end of the day do a performance review and say "you're doing an excellent job of looking after me today". (Ava, 26)

Ava referred to the other people in her life who released her from the constancy of being "the only one" or having reinforcement telling her that she was doing an "excellent job". This suggests that allofeeding in the form of social support is symbolic capital that increases the mothers' existing physical capital (energy, milk,

emotional and mental wellbeing), thus supporting her and offering her relief during the demands of breastfeeding.

The physical and emotional demands of feeding young children were also felt by women who bottle-fed (with breast milk or formula) whilst breastfeeding, in addition to those who exclusively bottle-fed. For these women, the advantage of bottles was that they could physically hand over (exchange) the baby and the feeding to another for the reward of returning to work, social outings, pumping breast milk, or sleep. Young women in particular often described how getting someone else to help feed the baby was the great benefit of using bottles. Many of the mothers who were less than 19 years of age were single parents and, despite using bottles, the task of demand feeding usually fell to them. Others, like Alex (25), who had four children including twins, agonised over wanting to breastfeed all of her children despite the challenges of breastfeeding twins while also caring for other young children:

Having a double breast pump [laughter from the other mothers] was a real flattering look and caring for four young children and to try to get them on the boob . . . eh. It was okay when my partner was off work, but as soon as he went back . . . I just couldn't manage. (Alex, 25)

### **Bottles, teats, dummies**

Bottles, teats, expressing equipment, and dummies are non-maternal consumer capital. As commodities they were purchased, gifted, and used with confidence because they were “the ones closest to the breast or breast-feeding”, or because the child health nurse or lactation consultant had recommended them. As tools, they aided some mothers' ability to “keep sane” because “I could keep trying to attach him to my breast, knowing he was getting my milk”. As capital and non-maternal allofeeding tools, they were exchanged for and converted into emotional and physical support. Dummies, teats, and bottles (containing formula or expressed breast milk) provided some mothers with relief from “24/7 breastfeeding”, helped them to get some sleep, feed the child when they could not be fed at the breast due to painful and cracked nipples, and to obtain relief from a “crying and fussy baby”.



Marshalling non-maternal allofeeding tools helped the mothers to exchange physical capital (milk, breast, and nipples) for profit (such as personal relief, infant weight gain, settling, and reassurance that “the baby actually got some milk because you never know how much the baby is getting from the breast” (Lucy, 30). The exchange and accumulation of the capital of prestige (breastfeeding/milk) into allofeeding provided “the optimal solution to the problem that would arise from continuously maintaining the whole” with limited maternal bodily resources (Bourdieu, 1990, p. 118). As capital, they were an essential resource that the women felt they needed “to keep going as long as I can”. However, their reliance on bottles, teats, and dummies did not offer any status or distinction within the field of motherhood.

The dummy was rarely talked about as a subjective versatile resource, unlike bottles that could be filled with breast milk. It was neither good nor bad, except in the context of objectified negative capital: “there is an anti-dummy policy in the hospitals.” Their use and presence as tools was pervasive across various fields (health, consumer, and motherhood) and appeared to be taken for granted as necessary. Although women felt conflicted by their use, which generated tension between the “need to have them” and what was considered “best practice”, the dummy was clearly part of the consumer-based landscape of feeding infants and young children, and parenthood. In the following conversation, the tension between the biomedical, consumer, and motherhood fields is evident:

Yeah, and one of my friends who has a baby the same age as Benny [4 months], he has never taken a bottle, and that is so stressful for her because she can't go out for more than three hours or so. She works from home, and she was hoping that her mother or her husband could have looked after him. She can't do that because she has to be there all the time so she can feed him, and again the reason is because she was told “no bottle, no dummy, nothing but established breastfeeding”. We thought we were doing the right thing and I know we were at the time, but when it came to him having to have a bottle at that time it was stressful. So we'll certainly do that different. (Lara, 29)

We weren't told “no bottle, no dummy”. When I saw the lactation consultant, we did change the type of dummy. So even that information wasn't initially available because cherry dummies are better for breastfed babies than the orthodontic ones. So

we'd gone out and bought the really expensive \$12 one whereas the lactation consultant said just the \$4 in the supermarket is what's best for them. But we always intended to make sure she was having a bottle just in case I got sick or whatever else. (Anna, 29)

Dummies and bottles hold a contested place as resources for mothers. Anna in the earlier quote understood that irrespective of recommendations from health professionals, she intended to give her baby a bottle as a backup feeding method. Mothers' awareness of the tensions over bottle and dummy use and the limitations of their own bodily currency was evident.

Despite experiencing breastfeeding as "natural" many mothers still moved into the field of consumption by purchasing and using other feeding utensils to assist them to breastfeed. They spoke of "needing" to buy allofeeding mechanisms (bottles, teats, pumps and dummies). Women in the study had also talked of how they "had to be prepared" by pre-purchasing dummies, bottles, or teats, and explaining that they were "all organised for bottle feeding more than for breastfeeding" (Angelina, 32). Having to purchase materials to be organised and prepared for infant feeding locates breastfeeding in the same consumerist context as formula feeding, where tools are needed to facilitate its success. A group of three younger women (21–24 years) spent a great deal of time during one FG debating amongst themselves the pros and cons of bottle-feeding. These three women had all started breastfeeding and at the time of the FG were breast, bottle, and formula feeding:

It's easy to manage, I mean that's the whole bottle thing, the washing and all that. People say they hate even washing bottles and mixing formula, but you have to do it (Eden, 21).

I found that I was doing it [bottle feeding] when I was breastfeeding anyway. You had your breast pump and what not, you had to wash all of those. You had to wash all the parts and everything. It's definitely easier bottle feeding than what it is breast because I've done both. (Penny, 23)

I feel you've got with the bottle-fed you've got more of a connection because when you're breastfeeding you can't really see much of your baby when they suck on your

boob and when you're there with the bottle you can sit there and look at them and make a connection with them. (Eden)

You know what they're getting, as well you know how much they're getting. (Lillian, 21)

I had that trouble as well, you actually know how much they're getting with the bottle than you are with the breast. (Penny)

These extracts show that although some women found bottle-feeding easier after breastfeeding, it did not relieve the mother of her burden of guilt and regret at not being able to be a "breastfeeder". Bottles enabled the mother to see and know how much her child was fed. This need to measure and trust in the mechanism that provides the milk perhaps suggests a mistrust of their own bodies.

### **Expressing**

Expressing milk is the result of the exchange of two forms of embodied physical capital (breast and milk) and a mercantile exchange when mothers purchase the "right ones" that are like breasts (bottles, teats). Most women in the study had experienced expressing—hand or pumping and using bottles/syringes to feed the milk to the baby. Mothers elected to express their milk for many reasons including to provide nutrients, increase their milk supply, maintain their milk supply, so "my husband could feed her", to test and check the authenticity of their milk in quality, taste, and volume, and to "check if anything was really there". For some, "bottling up" gave them a break from the baby "being on me all the time", providing them with a "safe distance" to take a break from full-time breastfeeding. Only one mother talked of connecting with the physical practice of expressing breast milk, stating that she didn't breastfeed but "bonded better" when expressing compared to using formula. For the majority, expressing was a complex and "physically demanding" way to translate maternal bodily capital into symbolic capital through allofeeding. As a resource, EBM reassured the mother that she retained the status of good mother, of doing the best for her baby and continuing to "try to breast feed":

I love breastfeeding but it doesn't give me a lot of versatility around leaving her sometimes with other people. I don't have a huge supply, I just have about . . . two

bottles [of EBM], it would take me three to four days to get a bottle up as well as feeding her as well. So it's like it would be easy to just do a bottle up and leave her with her grandparents doing the feeds. I am stuck with her – [and I] use that term in the right way – constantly. If anything, I guess it's very hard to get a break, but that's just my . . . but I don't dislike that, but if I had to say something that was hard, that would be it. (Ivy, 30)

Although expressing helped the mother maintain her place in the field as a breast feeder, expressing and bottle feeding did not elevate the breastfeeding mother in social status, instead it caused internal conflict because of the stigma attached to “bottle feeding”. Mothers needed specific know-how and economic capital to express and use bottles. This know-how appeared to be obtained mostly through trial and error, although some mothers talked about lactation consultants and midwives showing them how to express milk. Mothers also talked about the necessity and expense of purchasing teats, bottles, and equipment to enable the exchange process:

Yeah, it's like just another thing I had to think about – trying to find the right bottle and teat and then express, I was just exhausted. It just didn't work for me, I hated expressing. (Stella, 27)

Mothers described their relationship with expressing as “sort of weird”, detailing the large variety of electric and hand pumps, tubes, teats, bottles, sterilising equipment, and special bags to store milk that were available. They often referred to how their partners liked the equipment, and how expressing was a balancing act. Many described how they felt objectified as if on display and “like I was a production line”. Nearly all mothers in the study found expressing milk challenging, time-consuming and described it as “hard work”. For some mothers, however, expressing and using bottles and teats was a welcome form of allofeeding. Issy, a mother of two, described the expressing routine as “gold”. She went on to explain: “Yeah, because you feed off one side and then express the other, but I didn't do that – [I] just fed and then expressed if I needed to” (Issy 31).

For some women, expressing and bottle feeding was not a choice but a necessity. Alexandra felt she had little choice but to express after “it [breastfeeding] not working

in hospital”. She counted herself lucky because of her excess milk supply, stating that she felt “blessed with a huge supply”. Alexandra went on to explain how she expressed using double pumps up to six times a day for 4 1/2 months so she could to continue to feed breast milk to her child: “I exclusively express and bottle-feed because she is not a good sucker. My supply is dwindling now” (Alexandra, 29).

For many other women in the study, “squeezing the milk out” of their breasts was part of their process of “trying to keep breastfeed for a little longer”:

I could only breastfeed – I tried, until about eight weeks, so . . . he had to go onto formula at 3 days old because he was losing too much weight because I didn’t have enough milk. But I expressed milk until he was 12 weeks on the dot, but by then he was getting about only one bottle every 24–48 hours of breast milk, the rest was all formula, because that’s all there was, and I was expressing every few hours for 20 minutes and getting about 30 mls. I really did what I could, and now he’s just on formula. (Gemma, 36)

Yes, well I express enough, so I think it takes me so long to express to a bottle, it’s just not worth it. (Xanthe, 26)

I can’t express very well. (Caroline, 41)

Expressing and using bottles had a role in helping mothers to negotiate physical feeding issues such as poor sucking abilities, low supply, or going out. In this context it is a resource that can be exchanged for social and physical versatility, allowing mothers freedom to return to work, socialise, and continue to feed their children breast milk. It mobilises breast milk as a commodity that can be shared, and offers benefits to and between multiple fields. The mechanisation of breast milk through pumps, bottles, and teats perhaps detaches the mother from her body and her child to some degree, and this may explain some of the tension it created for women.

### **Public feeding**

Public feeding also created tension for the mothers, which they found difficult to make sense of. This was because they felt conflicted by the message “to breastfeed” and the shame of “doing it in public”. Bottle feeding, irrespective of the milk in the

bottle, did not offer symbolic profit, and appeared to generate a negative capital. Across the age spectrum women talked of feeling “unwelcome”, “embarrassed” and “bad” about themselves because they “had to use a bottle”, especially when feeding their young children in public spaces. Women described how they felt “ashamed, like I should be breastfeeding”. The mothers in the following conversation (FG2) discussed the stigma associated with using bottles:

And it's not just that you choose not to, but that you physically can't, or your child can't, it's okay to not do it. (Cleo, 28)

And that's what I got told in the end. They're still going to grow up healthy . . . you're better off being a happy bottle-fed family than an unhappy breast-fed family (Mia, 33)

Sorry, when I went out and started bottle feeding, I felt really guilty with the bottle. Like I'd be out there thinking I'm only bottle feeding because I couldn't breast feed. (Isabella, 30)

Yes, you do feel like you're getting looked at. (Sienna, 39)

Yes. And judged, don't you? (Isabella, 30)

Yes. I bottle-fed with my first for the first three months out in public with expressed breast milk but I still got those looks. (Sienna)

I was giving her breast milk but I still got those looks. And you feel like . . . I've tried everything. You feel like you've got to justify your actions. (Cleo, 28)

Bottles are not an accepted infant feeding tool in the field of motherhood – despite prolific use of bottles by mothers. Many women in the study felt they had no choice but to rely on and “choose” bottle-feeding over breast, especially when breastfeeding “just didn't work out”. This caused a breach in the taken-for-granted doxic value that “breast is best” and “good mother” practice. It also produced a form of negative capital. Tension around the use of bottles as allofeeding tools was reinforced by the warning messages on infant formula tins that “breast is best”. Women reassured each

other throughout the FG discussions that “it’s OK to bottle feed”. The physical act of bottle feeding either used as a support or as a breastfeeding alternative generated a maternal nominal categorical persona: breast-feeder or bottle-feeder. Once the bottle – whether full of expressed or formula milk – has been used, the mother felt that she was no longer a breast-feeder, suggesting that allofeeding using bottles facilitates the mechanical single one-way exchange of nutrients. The bottle does not facilitate multiple reciprocal and dualistic-exchange processes that women unconsciously attributed to breastfeeding, which supported the mother to feel worth and valued as a mother.

Nothing appeared to relieve the guilt generated by deviating from the taken-for-granted doxic value “breast is best”. A constant tension was evident, which [re]produced bodily uncertainty around feeding choices that was reinforced by comments made by other people. Many participants said that they felt uncomfortable and judged when feeding in public, regardless of how and what they fed their child:

And even bottle feeding, people give you looks like you should be breastfeeding, and then you breastfeed, and they give you mean looks for breastfeeding. (Ruth, 23)

There was a sense of vulnerability in many women’s accounts as they explained how they negotiated feeding their infants and young children in public spaces (hospital, shopping centres, and in some cases parts of their own homes). To manage the uneasiness, women used bottles, muslin wraps, and items of clothing as a buffers and to shield themselves from the public gaze when breastfeeding. When women spoke about breastfeeding in public the breast appeared to fall into two categories that I refer to as the *social* and the *private* breast. The *social* breast is described below by Abby when she spoke about “getting your breasts out in public”:

I just did it, but I have to say I was never happy with it because I actually found that really difficult, that you spend your entire life with this strong social norm to not get your breasts out in public because that would just be crazy, and then all of a sudden you have to abandon a lifetime of conditioning and get your breasts out in public and I didn’t like it, I found it difficult to overcome that. I tried once to use a blanket thing and it was just too bloody hard. (Abby, 30)

The feelings around the *private* breast were difficult to assess. Privacy was interpreted as a safe place to feed (breast or bottle) and not necessarily away from people. Feeding from the breast was private because it was felt to be a very personal bodily practice for women. The private feeding or breast also reflected the intimacy generated between mother and baby when breastfeeding: “breastfeeding is my time with him.”

Yeah, same with me, and a nurse came in and actually told everyone to leave, and I’m like, “no”. I just felt really embarrassed type of thing, and I wasn’t a person to go out and just rip a boob out and put the baby on, I’m not that type, I like to cover up and that’s another reason why I sort of give up because a lot of other people just look at you as if to Say, “you don’t do that here, you’ve got to go and hide” type of thing, and so in the end. It was like “no”! (Eden, 21)

There was also tension amongst the women about the relative importance of breastfeeding discreetly when in public, and how this should be achieved. Mothers who “just flopped it out” or “hang it out” offended some women in the study. Very few mothers described feeling comfortable with breastfeeding anywhere that was felt to be exposed or public; if they did describe this, they coupled the comment with descriptions about how they took care to be discreet by using blankets, wraps, or finding a quiet place. Molly, although quite comfortable with breastfeeding “anywhere”, ended her conversation by saying:

Sometimes I might think “oh, I don’t want to do it here”, I might find a quiet place or whatever, but generally we just feed where we need too. (Molly, 28).

She also considered herself “lucky” that no one had said anything to her about feeding in public places.

For some mothers, the experiences of using their breasts to feed challenged their belief that “breast is best”. Many described struggling to feed in front of people, even when they were in their own homes. Some felt “OK” feeding in front of their partners but were very challenged by feeding in the presence of midwives, doctors, or other family members. Younger women described how their partners’ (if they were in their



lives) perceptions about what breasts were for (particularly the idea that breasts were primarily sexual) made breastfeeding in front of other people difficult.

Public use and support of the slogan “breast is best” was perceived by women as affirmation of the nutritional value associated with breast milk and breastfeeding. However, this version of “breast is best” did not carry with it the value of closeness that women described. Nor did it change how the general public responded to mothers actually breastfeeding in public spaces. Women reported feeling confused about the apparent hypocrisy of espousing the value of “breast is best” and what was “allowed and acceptable” in public. Mothers accommodated the tension surrounding feeding young children in front of other people by seeking out “quiet places or rooms away from everyone”, so they could “discreetly feed her”. Women in the study explained this by saying “I wasn’t so concerned about people seeing me, but more so I didn’t want to affect anyone else” (Ellie, 28). The value of breast milk and breastfeeding seems to be at odds with the social value of what breasts represent and how children and mothers are valued as social agents.

Interestingly, two young mothers challenged the hypocrisy, suggesting that mother-baby friendly feeding rooms were “sending the wrong message to us”. When asked what would help, Natasha (20) and Meg (19) gave their perspectives:

Definitely not having the strict breastfeeding policies. (Natasha, 20)

Especially when the [local public hospital] is so strict on breastfeeding, yet they’ve got breastfeeding rooms in the hospital, and they’re trying to promote breastfeeding being OK in public. Yet they’re putting them away in breastfeeding rooms (Meg)

Understandably women felt confused by the mixed messages, claiming, as one young mother did, “yeah, ‘breast is best’ but don’t do it here” (Meg). The mothers’ sense of shame and embarrassment regarding how and where they used their breasts and bodies to feed their children suggests that their agency is restricted by the tension. This acts to dilute the value of “breast is best”, [re]producing a practice of withholding breastfeeding.

When mothers in the study were asked about public perceptions of bottle feeding (without specifying the type of milk) Hayley (27) felt it wasn't an issue, and simply stated "no problem". However, her friend Ellie (28) had a different experience, and had noticed that the general public reacted to younger women and little children [babies], saying:

You do get comments, particularly when she was younger. Like "Oh, you're feeding her on a bottle". Particularly older people'. (Hayley, 27)

Similarly, Elizabeth (33), a mother of three, just "had a feeling" that she was being judged by other people and referred to a stigma around infant formula milk feeding. In the following FG excerpt from FG7, participants speak about how they feel about bottle feeding in public:

I didn't like to bottle feed in public very much either for that same reason, particularly when she was much younger. A lot of times it was expressed milk that she was having in a bottle in public, but people don't know that and they assume you're giving formula and there is that stigma around formula feeding as well. Again, I never had an issue, no-one ever said anything or looked at me funny, but it's just in my own head that I thought . . . just a bit embarrassed about it. (Jasmine, 39)

When I feed [breast] her in public, I always have this muslin wrap that I just put over. I seemed to get coordinated enough for it so . . . I just never got it [bottle-feeding] happening. (Sarah, 34)

Yeah, it is, it's very isolating. And I mean I should be able to quite comfortably sit around the dinner [table] and feed my baby, but early on I think it was more I didn't want to offend anyone else by getting my boob out, and now it's that I physically can't because if I was sitting in a room full of people trying to feed him it just wasn't going to happen, he wouldn't get a good feed. So it is incredibly isolating, I think. (Ellie 28)

### **Fathers as allofeeders**

During the FGs, mothers were prompted about their views on who helped or didn't help, and specifically how the mothers' partner fitted into infant feeding. The majority

of women in the study were either married or in a de-facto relationship (82%) at the time of the FG study.

Collaborative partnerships with the father of the child are beneficial to mothers who described feeling supported and less burdened by the “full time” demands of motherhood and breastfeeding though this shared bond. This does not negate the positive effect of other members of the mothers’ support networks, such as their own mother, or father, friends, and siblings. However, it was clear that the father of the child held a place that created both tension and opportunity for the facilitation of continued breastfeeding. The following FG excerpt illustrates a bi-parental approach to feeding where the feeding preferences of the father encouraged mothers to keep trying even when they felt that they couldn’t continue to breastfeed:

Yes, my hubby researched into breast milk and all of that and he said “I would like you to”, well yes, so we sort of had a bit of a headbang about that, but I couldn’t . . . so (Alana, 29)

My husband was the same. (Mila, 28)

Yes, I couldn’t so . . . (Samantha, 30)

It’s very personal, I think. (Mila)

Q: So your partners really wanted you to breastfeed?

Yes, well he’s got three kids previous and all that and they were all bottle-fed, so he sort of wanted him to be breast-fed and all that because of all the nutrients and all that through the milk, but I couldn’t anyway, but he’s sort of a little bit disappointed, so that made me feel a bit crap, but what could we do. (Alana)

The fathers’ investment in the mother and child places him in the position of an allofeeder and supporter of breastfeeding. Women often spoke about wanting to share the “closeness” that they had experienced having a young baby, with their partners. Gabriella a mother of two (24) described how she grieved for the connection after stopping breastfeeding while also experiencing feelings of relief achieved through

letting her partner feed their child: “It was a relief to stop and let Phil feed her. I still miss the closeness, it’s not that you don’t get it with bottle feeding it’s . . . just different cause others can do it to now’ (Gabriella). Similarly, Ivy (30), who had stopped breastfeeding at day 3, wanted her partner to experience the same feeling that the few days of breastfeeding had given her, so decided to bottle-feed to enable this to happen:

Well I found that after, what I feel was a fairly traumatic start with an emergency caesarean, and 10 days in the special care nursery. And it [breastfeeding] took quite a while, having been sort of separated to start with, to actually go, “Oh I have a baby.” And that was like really special time to sort of sit and bond. And that’s one of the reasons we’ve gone to the bottle-feeding, so Dad can have that time too. That’s been a bit tricky for us. (Ivy, 30)

The most important person in most of the mothers’ lives was the father of their child. Paige (34) who had a bachelor degree and was a first-time mother, expressed how the support she received from her husband was the key. She talked of using her husband to relieve her of her baby: “To come home and just take Rory, and I just need to have a bath and relax. I think that’s key.” Paige compared herself to others, saying: ‘So I don’t know what women do [who] don’t have that support network.’”

Having a supportive partner increased the mothers’ accumulation of capital, their self-efficacy and ability to “get over” negative feeding experiences. In the following quote, Molly (28) talks about the reward she receives from seeing her partner bonding with their son:

That’s what I didn’t get to say, what has been a real positive for me is although I had those couple of negative weeks and months, once we got to the bottom, my life just opened up and my husband started to have such a wonderful bond with Hudson that he will do night feeds . . . as a consequence, he knows what to do with Hudson; he’s very hands on. I feel confident completely leaving him, and I could go out with my mum or I could go out with girls and actually get away from him – as much as I love him. So, that is a big positive (Molly, 28).

During “making enough milk”, lactation and physically negotiating breastfeeding, women used their partners intermittently to lessen the physical and emotional demands that being a “breastfeeding mum” placed on them. As the primary feeder and provider for the dependent child, women talked about feeling exhausted and “never getting a break”. Thus, women shared the feeding duties through expressing and bottle-feeding, and formula feeding, and this is illustrated in the following FG excerpt from FG2.

Yes, that was a problem I had for a while, which sounds a bit funny, but it was really upsetting because I felt like I could not have a break. Every three hours I had to be with him and it was a bit overwhelming, but it’s that I didn’t have the choice. (Ruby, 28)

Yes. And I think that’s definitely one of the benefits of bottle feeding because your partner gets that nice cuddle, bonding closer. (Mia, 33)

Yes. (Ruby)

Yes. And with our first two, that was a big influencing factor on us staying on the expressed milk because we were able to get to sleep, because he’d get up at the one o’clock feed, I’d get up at the four o’clock feed and we’d both get six or seven-hour single blocks of sleep, so that was a huge advantage to bottle feed. (Isabella, 30)

It was evident that sharing the burden with their partners was important to mothers. Apart from relieving the pressure women felt to breastfeed, it enabled them to invest in sleep, to consider returning to work, battle through feeding difficulties by expressing and have their partner bottle-feed, and helping them translate information. The need for partner support was particularly strong during the early feeding period (first 6 months). Mothers who did not have this support wished that they did:

He was never there to make any decisions about feeding, [and he’s] now not there to help with school stuff or anything like that, their haircuts, check-ups, or anything like that, it was always up to me. (Lillian, 21)

Q. So do you think they would have supported whatever feeding choices you made?

No! They wouldn't care, mine wouldn't care. (Lillian)

It's like now he has, the father of my kids has week-on week-off, but it's still my choice to do their check-ups, if they're sick to take them to the doctors, to take them to get their haircuts, feed them, he is just there. (Penny, 23)

You take on all the roles, he's just their babysitter, you feel a bit like that. (Lillian)

Among young mothers who were not partnered with their child's fathers, feeding – particularly breastfeeding – was considered to be the mothers' decision, as “the mother chooses all the big decisions and they've just got to go with it”:

Don't get me started. (Susie, 21)

My son has nothing to do with his father, hasn't since he was 18 months old. (Lesley, 19)

Sharing the infant feeding was not always a positive experience. Some women struggled against their partners' views of breastfeeding especially when the partner suggested “swapping to formula”, or that it didn't really matter whether she breast-fed or bottle-fed. The opinions of their partners were important and persuasive. Issy felt influenced by her partners' indifference towards her breastfeeding:

Yes, I think so, because my other half keeps saying, “you don't have to keep doing this, you can stop and put her on formula, it doesn't matter”, and I'm like, “yes, I know, but it's good for her, I don't really mind that much”. (Issy, 31)

There appeared to be an undercurrent of competition between the parents in some families. Mothers felt that they needed to share the feeding role with their partner, stating: “I let him feed him sometimes to establish that bond”. Conversely, other women felt conflicted, saying that “I feel bad because he never gets those cuddles like I do”. Women took on guilt generated from competition for time with the baby.

The personal desire “to breast-feed” and to be the primary feeder establishes a boundary of social and physical isolation. Fathers appeared to be isolated by the feeding method by default. It was unclear whether it was the physical act of feeding at the breast or the mothers’ ownership of the primary feeding role that created the boundary. During cessation, where formula milks were introduced, women felt that they “needed his [partners] support to do this”. However, they clearly took possession of their role as the breastfeeder, non-breast feeder and the perceived failure of cessation, verbalising how they were the “only ones that could do this [breastfeed]”. Mikayla (24) a young mother of three, firmly stated that what she enjoyed most about when she breastfed was the “bond”, and that the fathers or males in general could not gain that special connection:

The bond that you get with your kid . . . no one can ever change that bond that you have with your kid. Whether or not the father comes into it, he still can’t get that same bond and, whether or not the father’s around, no matter which father figure, Pop or father, you’ve always got that separate connection with that kid. She would have a connection with Brock and Selena that the father wouldn’t. (Mikayla, 24)

The support women received from the partners who were active was felt by many mothers to be essential. Many stated that they “: couldn’t have done it without him”, “he was my key support”. Fathers who feed the baby with expressed breast milk (or colostrum) or formula appeared to provide feeding security for the breastfeeding mother. This was the case for Lola:

The very first breastfeeding when he was first born, he latched on fine as soon as he was born, and then I had quite a bad tear and I had to [be] stitched up, I had to be taken to theatre to get stitched up, so I expressed some colostrum to a syringe and my husband gave that to him while I was up getting stitched up. (Lola, 27)

The type of milk feeding used appears to influence the support generated through bi-parental feeding. Women appeared to feel cheated by formula use, as it replaced their contribution. Sienna explained how she “felt useless” and not needed when her husband bottle-fed her daughter using formula for the first time. Because it was her

husband and someone who she felt had the same level of investment in the child, she felt that “it was okay in the end”, and could only just stand there and watch:

My husband gave her her first bottle of formula, and I stood in the kitchen and I bawled, because she didn't refuse it, she just went straight onto it like it was just another bottle of milk, and it made me feel very – not useless – not needed any more. Like she wasn't dependent on me anymore and that was a very sad moment. (Sienna, 39)

Allofeeding as a resource is a creative use of capital to enable shared feeding and caring. To some, the transactions that take place – where breast milk is exchanged for bottles that offer women time, rest, and mechanical feeding of the baby – appear to help the mother retain a degree of symbolic capital, such as the prestige of being a breastfeeding mother. Importantly, allofeeding, particularly when the father of the baby is involved, benefits the mother and father collectively as a care and feeding unit. The mothers' partner and her physical capital (breast and milk) appeared to be mobilised as capital and exchanged for the benefit of the family unit. When this relationship was absent, women often felt alone.

### **Others and kin relationships**

Others (health professionals, grandmothers,) were found to be either “supportive” or “interfering”:

He wouldn't attach properly and they [midwives] were saying it's my fault, but I had my mother-in-law actually there with me. She actually knew I was doing it [breastfeeding] right, because she's been and watched 14 women give birth. (Meg, 19)

For some women, the presence of other kin such as a mothers-in-law offered women comfort and trust in their bodies. Mothers referred to grandparents and family – both maternal and paternal – depending on the quality of the individual relationship as those who they trusted to “leave him with so I could go out”. For most women, expressing breast milk was used as the milk to enable the chosen allofeeder if the father of the baby was absent. However, this was not a common situation and for most women, using others to feed their dependent child was something that required



planning and “enough milk”. Other women were reassured and supported by their family when breastfeeding “just didn’t work out” as planned:

My mum was really understanding because she didn’t really get the knack of breastfeeding either, and she had three children. She really helped me by telling me that it [was] okay, that if it doesn’t work it would be okay, but to try your hardest and that is all you are expected to do. (Maya, 21)

Similarly, Kayla (20) explained to the group how her mother took over the care and feeding of her first child because she “just couldn’t manage to breastfeed her”. Kayla felt she was “so young”, and told us that she was suffering from depression at the time:

Yeah, I had a hard time with Beth. I had really bad blisters and I ended up getting postnatal depression as well really bad. I think it might have been because when I was feeding it was hurting me so much. I think that had a lot to do with it. I felt like she was just hurting me all the time. Yeah, that ended up pretty bad. My mum ended up taking on full care, feeding etc. of Beth. (Kayla, 20)

This situation was not necessarily a positive one for Kayla, as she went on to describe how the lack of breastfeeding broke the bond with her daughter. However, having a supportive family did provide her with the assurance and ability to regain a connection.

Women were happy to talk about their experiences and interactions with health professionals and freely volunteered their views. It was very clear that they did not use them as allofeeders, but instead as a conduit for information, advice, and direction. Isa’s summary is most telling;

I think – I guess my point was that it doesn’t have to be a health professional, like as long it’s somebody that can sort of, you know, you can talk to, and then they can say, “oh, maybe you do need to see a doctor about this”. But I don’t think you have to necessarily get feeding support from health professionals, but someone that is able to say to you, you know, if they think, “oh, maybe this is a medical problem, you need to go and see someone”. I think in a lot of cases you’ve got . . . that yourself, but I think just for sort of general feeding support, and breastfeeding, and parenting, I think

that it needs to be more of . . . a community thing rather than “this is the health professional that you go to”, because health professionals are stretched enough as it is. (Isa, 32)

Mothers seemed to consider that the role of health professionals was to provide support, information and not interfere or “tell me what to do or how to feed my baby” (Mikayla, 24). Health professionals were used as a commodity, a service they tapped into when necessary.

Overall, women were disappointed with the support they received from health professionals. Lisa (31) stated she “wasn’t too pleased with some of my health nurses early on” and felt she needed to “shop” for a child health nurse that she was comfortable with. Conversely, mothers found that specific individuals such as midwives, paediatricians, and obstetricians were helpful during an episode of feeding difficulty, suggesting a type formula or giving them permission to stop breastfeeding completely: “This older lactation consultant helped me and was like, ‘it will happen’,” (Imogen, 30) Overall, women saw them as guides and supports but not people who could help them to feed their children. Two women from the same group talked about their views:

I think it’s important that you have a professional, whether you are going to a midwife or whether you are going to see an obstetrician, for them to guide you to go to the lactation classes and prepare yourself for breastfeeding. No one can tell you how it’s going to be, but they can tell you that there is some information out there which you can get. And it doesn't matter the cost. (Chelsea, 36)

Yes, and the other thing that I found, too, was mixed messages in hospital. I remember having a bit later I had cracked nipples and lots of soreness, and a male nurse actually gave me a nipple shield. So when I was given that to relieve some pain, other nurses were so angry that I was given it. And I was thinking “I have no idea what I’m doing”, and the nurses don’t seem to agree. (Scarlet, 37)

Health professionals (midwives, nurses, doctors) were experienced as either supportive, offering helpful support and breastfeeding advice or encouragement, or as one mother described, interfering and judgmental:

I think one thing as well would be if some of the health professionals were less judgmental if you are having issues and want to go to that bottle-feeding, because that judgment does affect your view and how you feel about things, at least that was my experience. (Annabel, 33)

Feeling judged generated tension between the mother and the health professional. To add to this, many women talked of experiencing conflicting advice which in turn reproduced feelings of mistrust. Stella (27), a first-time mother, who had to express her breast milk and use infant formula “because I just had so many issues and it didn’t work”, described how demoralised and awful the conflict made her feel:

I did, and like you guys said, different people told me different things which was very upsetting because you thought, “OK, I’ve got to do it this way”, and you’re doing it and then they come and the next one watches and says, “why are you doing that?” It sorts of makes you feel like you’re being awful and useless. (Stella, 27)

### **Major Theme Four:**

#### **Practice – Disjuncture: Failure and Grief**

The final major thematic category is Disjuncture; it explores the notion of *practice* (what mothers do) and how they make sense of cessation. Bourdieu says that “it is not easy to speak of practice other than negatively – especially those aspects of practice that are seemingly most mechanical, most opposed to the logic of thought and discourse” (Bourdieu, 1990, p. 81). Consequently, disjuncture describes the disembodiment of the maternal body’s physical capital, where the breastfeeding lactating body is metaphorically dissected into discrete forms of physical capital: breasts, milk, and nipples. These are described separately. The practice of Disjuncture is explored through the mothers’ experiences and use of their maternal physical capital (breast, milk, and nipples), and how they made sense of what Bourdieu refers to as “the most mechanical” disjuncture.

#### **Disjuncture**

Disjuncture is generated through the mechanical use of physical capital (breast, nipple, milk). *Capital* for the purpose of this analysis is understood as a resource (breasts,

nipple, milk) which are exchanged either together or in parts to help the mother negotiate the feeding of her child. Women possess various forms of capital in varying quantities. As the women talked about the act of not breastfeeding, they dissected their bodies into objectified parts that worked or didn't work. These were specifically the breast, nipple, milk. How mothers negotiated their physical biological capital is described under the following sub headings: breast, the nipple (the "naughty bit"), and milk. This is followed by mothers' experiences of infant formula as a separate form of consumer capital. This section ends with the sub-theme of *grief*, which was an overriding thread throughout the entire analysis.

Women are socialised to cultivate "body-schemas" for social profit, such as having a healthy, settled, well-fed child, and a good body/mother status (Blum, 2000; Williams, 1995). However, the "cultivation" and transmission of natural and biological physical capital (Bourdieu, 1984) such as breasts and milk is problematic for the mother. Being "expected" to breastfeed and instructed to "get it right" while being watched and assessed by experts from subfields objectified the mothers' physical capital. The breast, nipple, and milk were understood and used as segregated operational parts that required "health expert" management and "fixing". This acted to remove the mothers' capital from her control and her body, where women described feeling confused and helpless. Bourdieu (1990) argues that the body does not represent what it performs, (Bourdieu, 1990, p. 73). This may help to explain why women felt at odds with their lactating breastfeeding bodies, disempowered by what they perceived was a lack of practical "know-how", and ability to manage their "insufficient milk" or "huge, out of control leaky boobs". Thus, having breasts and the biologically-inherited cultural capital (breast, nipple, milk) does not represent, or translate, to sustained or exclusive breastfeeding. The lack of bodily autonomy and exchange reproduced the "suspect body" (Bartlett, 2003), where women felt that they had no power, and could not trust anyone and themselves "to get it right".

Mothers and health professionals or experts (such as midwives and lactation consultants) play a key role in the transmission and dissection of maternal capital. Amber (24), who had three children under five years and lived in a socially-disadvantaged area, explained that health professionals "always try and intervene too much", venting angrily that "no one can tell you what to do with your body, they

[health professionals] shouldn't tell you how to basically feed your kid, how to make them go to sleep, it's my body". Amber's reference to interference was based on her experience of being "pushed" in hospital, and the midwives' assumption that because she was young and from the "a bad area", she would "give up". Evidencing both the women's resistance to, and the pressure on mothers to perform and fit in with the dominant structure of the biomedical field (Shilling, 2003a, pp. 125–127).

If the mother's body did not perform and fit in (e.g. breastfeeding problems; low milk supply) the lactating body was broken up to enable health professionals to manage the mothers' choice to breastfeed, and return some form of profit such as partial or mixed breastfeeding. Women spoke of how their breasts were expressed for the milk "because the baby wasn't getting enough", how they were "attached to this machine and being milked like a cow", and how their milk was put into bottles with teats that were "breast-like". The operationalisation of the mothers' capital demonstrates the manipulation of the lactating, breastfeeding body. It is broken up to fit in with the social and bodily hexis (Bourdieu, 1990) of "good and best". As a type of physical capital, the mothers' body and what it produces becomes socially and culturally versatile without the direct need for the agent (mother) to be involved. The mothers' experiences suggest that translation of embodied physical capital such as breasts, nipples, and milk can never be guaranteed (Shilling, 2003a, p. 124), consequently adding to the mothers' feelings of disjuncture.

### **Breasts**

Breasts are a highly valuable, visual biological resource with divergent symbolic meanings: for milk and sex (Blum, 2000). The functioning or malfunctioning of the breast could demonstrate success or failure, "good mother" or "bad mother", reflecting the social norms derived from the maternal habitus (good and bad, natural and artificial, organic, caring, dangerous) (Blum, 2000c, pp. 180–181). Maddie (40) referred to her body as "have breasts, will travel" when discussing the benefits of breastfeeding on demand and her ability to leave the house for social events. Overall, mothers in the study often did not recognise the value of their body's capital as Maddie did, instead describing their breasts as unfinished and highly variable: terms used included leaky, gross and floppy, engorged, huge, swollen, and ugly. For most women, their lactating breasts were a "mess" and foreign to them. They did not know

what to do with the variable and conflicting types of capital such as “huge milk supply” or “no ‘milk’”, “sexual things for my partner”, asking, as Kirby (24) did, “whether they are for my baby now or my partner”.

Assigning their breasts divergent and mutually-exclusive roles such as “they’re for the baby” or “they [breasts] are for my partner”, because “I’m not comfortable with the baby on them”, or “that’s what they [the breast] are for, to feed your baby” plays into the social tensions that exist around the use of the female body. Roles also help the mother try to make sense of the unpredictability of her breasts during lactation. The practice of lactating from the breasts produces capital that is a surprise to women, and most women in the study they felt that did not have the additional skillset to translate their capital into profit; to exclusively breastfeed. Tammy (37) cited that: “I woke up and, oh my God . . . I wasn’t prepared for it, my breasts were leaking and everything was wet, the baby was crying and wouldn’t attach . . . I was out of control”. These accounts raise the question of whose breasts are they? Mother, baby, partner, or experts? Consequently, as a way of trying to make sense of the constant state of change and to compensate for perceived dysfunction, the breasts as capital were assigned roles as “functional things now”, and a redundant form of sexual and bodily capital.

The attempts to make sense of the breast’s function and achieve a profitable return from the bodily capital meant that the maternal body was often perceived as a corporeal (sick) entity, to be diagnosed and treated by others. Women felt “a little uncomfortable” with other people “poking about”, describing how their breasts had been touched by other people and that nurses and doctors interfered too much. Meg (19), shared how the “nurses and stuff just manhandle you, like ‘you don’t know what you’re doing so let me do it’,”. Participants also explained how their breasts were examined by experts for faults, “prodded”, “milked”, “squeezed”, looked at, assessed, and talked about in the third-person by other women, strangers, and health professionals. This was very confronting for the women, who reported their experiences with indignation and disbelief: “I just couldn’t believe it, this older midwife didn’t even look at me and started . . . milking my breast for colostrum” (Alana, 29). For the most part, reducing breasts to the divergent functional breast removed the mother from the intrinsic worth and identity of her body (Bartlett, 2003).

Ruth (23), explained “my breasts are just baby feeders now, gawked at and handled by everyone”.

Bourdieu (1990), argues that “inherited knowledge [being a breastfeeding mother] can only survive in the incorporated state” (Bourdieu, 1990, p. 73). Elizabeth’s self-deprecating summary of the expectations, and associated changes, that are meant to occur for women during motherhood (lactating, breastfeeding, being a “good mother”) are out of sync with what actually happens. The notion of “getting my boobs out” to breastfeed represents the mother’s efforts to translate the embodied inherited physical capital into an operational nutritional and social resource. However, the transaction is arrested by the conflict generated between the normative values of the mothers’ body, partner’s needs, health experts, the changes happening in and to the breast, and the value of the breast as an isolated piece of corporeal capital in the field.

### **The nipple: ‘the naughty bit’**

For women, the breast and nipple during breastfeeding held an ambiguous place. The breast was no longer a sexual organ, its current milky, detached state did not match the mothers’ previous personal understanding of female sexuality. Overall, women felt that breasts during breastfeeding were “for the baby”, stating “I don’t feel sexual at all” (Alice, 34).

Conversely, the nipple was clearly estranged as a socially suspicious sexual “object” that must be hidden, covered up, and kept sacred. Breastfeeding mothers were unsure what to do with a “weird” social “sexualisation and nipple phobia” circling them as mothers, and joked sometimes playfully about it, “oh dear, don’t show the nipple” (Stella, 27). What to do with the nipple became a spontaneous, lively talking point for the mothers during FGs. Mothers who breastfed during the session often apologised for revealing the nipple, exclaiming “oops, sorry, showed my nipple there”, or described feeding in front of family members and making conscious efforts to keep the nipple hidden “to avoid offense”.

People and books use this term “sexualisation and nipple phobia” because where they say nipple, breast is okay, but the nipple! That’s the really naughty bit. (Savannah, 35)

Yes, it is. (all women agreeing, laughing)

I found back when I was breastfeeding, so long as the child was attached it was OK, but if she pulled off from my nipples ... ooh, dear (laughter from everyone). (Savannah)

That's interesting, very interesting. (Sara, 30)

Yes, my husband was funny about that. I was allowed to have my boob out but if my nipple was showing then that meant that he was concerned about the people seeing and that actually to start with, he would cover me. It would be like baby's head covered, boob covered, shoulder covered, everything, and then I got him to the point where he was OK with skin but if there was nipple at the end then he couldn't cope. (Holly, 28)

Nipples were controversial. The elongated and erect nipple during breastfeeding is out of place, its presence confronts mothers, their partners, and the public. This may reflect how the maternal lactating body remains part of the masculine notion of sexuality and thus symbolically represents a sexual act such as an erection. Clearly, contextualising the nipple as suspicious and something to fear negatively influences the mothers' control over her embodied capital.

The sexualisation of the nipple, and its dissection from the maternal lactating body, transformed the nipple into unresolved dormant capital. As a separate resource it could be used in various fields: cared for by health professionals, smothered in consumer products such as creams or nipple shields, and managed by public and masculine perception of what is appropriate when breastfeeding. Described by some women during breastfeeding as an individualised organ that generated negative capital (cessation) due to "toe-curling pain", the nipple had its own separate function. Young women in particular didn't like "the ideas of something sucking on my nipple", referring to feeling "dirty", again reiterating the sexualisation of the suspect maternal appendage. As evidenced in the following quote, the young women were naively aware of their nipple as divergent deviant capital:



I didn't really like the idea of breastfeeding, just because it's your breast and you have to show your breast to breastfeed, I would have been a bit more OK with it, but I hadn't filled up at all, I only filled after my baby girl, Chloe. So there was a tiny bit there, but not much. (Bec, 17)

Q: But you didn't like the idea of it, you said?

No. The yellow stuff that they need, that's why I would have done it for the first few weeks. But just, I don't know, I just didn't like the idea of something sucking on my nipple, basically. (Meg, 19)

My mother was like that. Yeah, I had that feeling. I just felt dirty. (Lee, 19)

And whether they bite as well, because everything is so sore, and you're worn, and you're emotional after you have a baby, there would be nothing worse than having sore nipples. (Bec)

Other than a sexual organ, women talked about mechanical issues surrounding the use of the nipple; the nipple was a tool that needed work, care, and to be maintained. There were creams, nursing pad shields, nipple protectors, and teats shaped as nipples that encouraged the interpretation of the nipple as an instrument to facilitate an exchange of milk and profit. It was the maternal tool that enabled or disabled the child from attaching and feeding, "attaching to the breast correctly", so they [the mother] could "get it right". It was also spoken about in the context of degrees of nipple damage (tearing, bleeding, pain, oozing, grazing, infection, and thrush). The condition of the nipple was often directly related to whether the mother felt she could continue to breastfeed, express, or used formula. The lactating breast and nipple are socially-constructed forms of physical and symbolic capital that often work in opposition to the maternal habitus and breastfeeding. Milk, however, was a recognised maternal substance – "white", "milky", and "designed for babies" – and thus held a firm place in the field of motherhood.

### **Milk from the breast**

Milk from the breast was highly valued by all the women in the study, irrespective of their age, social status, or education. Breast milk was talked about as special,

nutritious, “gold”, providing the best, but always in the context of revered scarcity. It was predominately a secret “perfect food”, taken from the breast’ and converted to a healthy commodity for the wellbeing of the child. Consequently, women described how they were advised by health experts that if the baby “won’t attach”, “you know you can just express and feed, it’s [the] best of both worlds’ (Anne, 33). Chelsea reasoned that her perseverance through “low milk yields and pain” was because “I just know that it is actually good for the baby, knowing that you’re giving them a really good start, and no one else . . . it’s up to you, there’s no one else that can do this for you” (Chelsea, 36). The dependent child was the receipt of transaction, legitimising the commercial value of the breast milk as a product.

In regards to profit, the mothers did not talk of receiving any benefits from milking the breast or breastfeeding. Instead, they objectified themselves and lamented over the intensity of the labour and “hard work” of using their milk, generating milk, and expressing their milk. Women referred to the impact on their bodies, describing themselves, as Annabelle (33), did as “cows”, and “exhausted”: “I was incredibly engorged in the first few days, I felt like a newly-calved dairy cow, in fact that’s what my husband called me.” It was unclear whether the mothers used the cow analogy to objectify and value their bodies, or to reduce the production of breast milk to a commodity and distance themselves from their bodies and children – “just something you do to provide for your baby”. Women, partners, and health professionals all used the analogy of “cow” to describe the mother’s bodily relationship with their production of breast milk, placing her in the position of the producer.

For many women milk – or the lack of it – was an elusive substance that could not be controlled. Breast milk was intensely micro-managed, “sucked out” by biomedical equipment (syringes), cared for in temperature-controlled environments, managed, bottled, “squeezed out in drops” and preserved as if it was a “magical”, “precious” substance used to protect and enable the baby to grow and thrive. The cost to the mothers is questionable. Even though it was revered as a valuable resource for its potential health powers, breast milk and the mothers’ bodies were undermined by the mothers’ and health professionals’ concept of “not enough milk”. Consequently, as a form of capital, breast milk is uniquely feminine and thus mistrusted because of its

unpredictability (Bartlett, 2003); as Willow (33) said: “There is never enough or too much.”

### **Formula feeding: loss and shame**

Cessation – using infant formula milks—was difficult and complex for breastfeeding mothers to negotiate in a social world where breast is always best. Not having enough or having too much breast milk generated bodily mistrust, feeling of loss and shame, and a “desperate need” for an alternative to negotiate the process/practice of cessation. Overall, the use of formula (and to a lesser degree the bottle)—and irrespective of the milk—generated feelings of disembodiment and personal failure. Women objectified their bodies and spoke of feeling obsolete, and replaced by formula milk and or bottles. As the following quote indicates, mothers were distressed and unnerved by “feeling a failure” at having “had to use formula”. This reaction resonated with other women’s experiences of using infant formula to “replace” and supplement when breasts “didn’t work” and didn’t produce enough milk:

The first time, it’s very hard to say “I can’t do this, I’m a failure”, basically, that’s what you feel, you feel like “I should be able to do it” [breastfeed]. Because, we’ve been told, or had the feeling that it should [be] and is natural (Hannah, 40).

Some women worried about the “chemicals in formula”, comparing it to breastfeeding’s perceived nutritional pedigree. Melisa (30) who held a tertiary education and had taken 12 months off work to “get a hold on breastfeeding”, valued breast milk because “breast milk has over 300 ingredients or something compared to 90 in formula”. Amanda (30) from the same FG, supported this by saying there was no synthetic substitute that was a parallel with breast milk. Chemicals, synthetics, and the uncertainty of infant formula as milk product played into women’s fear of its use, the efforts they made to keep breastfeeding to avoid using formula: “The synthetic stuff in formula makes you feel uneasy” (Melisa, 30).

The practice of formula use was also viewed by women as breaching a moral code of conduct, as if “I’m doing something wrong” (Emma, 30). Its use also sent what the women referred to as a clear message: “Now I’m a non-breast feeder,” (Clare, 36). Infant formula milks had a different meaning for the mothers compared to bottles and

teats and dummies which were considered as discussed previously as allofeeding tools. Formula *substituted*, whilst the bottle and teat *augmented* through the continued use of the mothers' physical capital (breast milk), retaining some status in the field of motherhood. Hannah described feeling like a failure because she "had to use formula" and couldn't breastfeed because of her lack of milk. Not being able to do something that was "natural" and instinctual was felt to be counter-intuitive. Bourdieu (1990) suggests that "the body believes in what it plays at" (Bourdieu, 1990, p. 73); for Hannah and many other women who used formula to replace their milk the experience did not make sense, causing her to feel like "a fish out of water", and experience what Bourdieu calls *hysteresis* (Grenfell, 2008, pp. 131–135). This is the displacement between the doxa, maternal habitus [value to breastfeed], and the field of motherhood, where breastfeeding is appropriated as natural, best, and good. The capital Hannah had assumed she had, and had unconsciously accumulated and then internalised as part of the maternal habitus as a resource to help her to breastfeed, had failed her. She, as many mothers did, internalised this as a permanent mark against her capacity to mother and provide for her dependent child.

The following discussion involving Harper (29), and Elizabeth (33), illustrates the complexity of negotiating cessation (using infant formula), and the breastfeeding body:

Can I just say . . . I think the finality of it, because if you abandon it it's FINAL, I think that's what kept me going for so long . . . that you just think "just hang on a little bit longer, just hang on a bit longer". And yep, once you give it up, you can't get it back, that was the motivating thing for me. (Harper, 29)

I'd agree with that. And I think there was also an overwhelming . . . I probably wouldn't have admitted it at the time but I think, looking back on it, I didn't want to go to formula. There was that stigma about it. If I couldn't do this, I was going to give my baby formula, and I was going to somehow deprive my child of their nutrients. (Elizabeth, 33)

And that you're a bad mum. (Harper)

And then I'm a bad mum, and "women have been doing this for so long, surely I could do it too, what's wrong with me?" Then there's that perseverance type of thing going on, and a little bit of stubbornness too, I think. I would have just . . . actually one of the mums who is not here today still finds it painful to breastfeed but she is just so determined just to keep on breastfeeding that she's just hanging on in there and I reckon I probably would be like that as well. Started resenting it maybe but would have just held in there for the sake of Grace. (Elizabeth)

Formula milks sat firmly in the background (*habitus*) for many women. Jessica (37), retold how she felt that "formula was the backup, not the choice". This suggests that mothers negotiate and make choices during their breastfeeding journey with the silent understanding that formula is a fall-back. Some women made sense of this by rationalising formula as a form of allofeeding describing it as "oh, I guess it must be OK, it's for babies and they wouldn't make it and sell it if it wasn't". (Olivia, 26)

However, women tried to avoid formula as Elizabeth did "for as long as I could". Mechanical problems such as painful nipples, low supply, and difficult attachment were frequently mentioned and coupled with "needing to" supplement or express and bottle-feed. Women breastfed through "torn and bleeding nipples", and expressed for months to "just keep going a little longer" and "just to give him breast milk". This pushed women to persevere and make use of other tools such as bottles and teats, expressing pumps, and medications to increase their milk supply. Having "breasts that won't work", or "short, flat, useless nipples", and experiencing "irrelevant antenatal education" signified redundant capital, generating the dislocation between the *habitus* [value] and practice. Generally, women felt they failed themselves, were judged as "bad", "dirty", or "naughty" mothers who put their baby at risk because they could not—as Elizabeth in the previous quote had felt— "do what women have been doing . . . for so long: breastfeed. Women could not resolve the conflict between something that is "meant to be so natural" and "not being able to feed my own baby" (Sophie, 30).

Women used, and reflected on, infant formula as a "necessary evil" that was often kept in reserve "just in case I had problems" Kim (27) said, acknowledging "you cannot get away from formula, it's everywhere". These sentiments demonstrated the

pervasive presence of products that threaten to replace the mothers' physical capital in the field of motherhood. Women of all ages spontaneously talked of how they had noticed that breastfeeding was "oddly" endorsed on every can of infant formula. Sarah (34) exclaimed "oh, but don't forget 'breast is best'" as she spoke about "failing as a mother" and needing to use formula. This was interpreted as both well-intentioned advice and a warning against something that was "good but not quite as good as breast milk". These few words were repeated throughout the study when women talked of "turning to formula" after not being able to breastfeed. Alana (29) responded sarcastically after explaining how devastated she felt having to use formula: "Yeah, it's like "OK, don't worry if you can't breastfeed, here's some formula, but don't forget 'breast is best'." This appeared to send a mixed message to the women, and had a counterintuitive effect causing sadness, guilt, and confusion. Essentially, having the warning "breast is best" on a tin of infant formula in bold lettering established a connection between the two opposing feeding practices, and conflated breast with infant formula feeding.

For a small number of mothers, using formula was not always experienced as a negative. After what was felt like an insult and "unnatural", some women found relief in knowing that their child was gaining weight and had stopped crying. This appeared to be trade-off between practice and habitus, creating conflicting feelings of sadness and reward. Thus, the presence of infant formula offered some women an alternative when they felt their "milk had gone", or they "could not stand it [pain] any more so we just changed to formula" (Amy, 19), or as Millie explained "when you physically just can't or your child can't, it's OK to not do it" (Millie, 28).

Formula was often framed as an intervention, used to fix breastfeeding difficulties or if a child did not feed from the breast. Mothers understood that the formula "fed the baby" and thus replaced their breast milk, and their ability to "provide for their baby". For women such as the mothers in the following quote, the formalities of needing to sign a consent form to use formula when in hospital after the birth, and feeling pushed to go on breastfeeding, battered them with guilt and challenged their faith in their bodies and their child:

My experience, though, with that in hospital, when she was in hospital, my supply just went off because I was getting one hour's sleep a night, I was very stressed. The lactation consultant there pushed me, was pushing me to go on feeding myself. In hospital you've got to sign a consent form to allow them to feed your child formula. I ended up signing the form, but she was very all about "you're not doing [your baby any good] . . . [I was] balancing . . . between not doing my baby any good and the stress I was putting on myself, and also the formula. (Ivy, 30)

That's interesting, because I was just saying my husband did six months in paediatrics just before Jack was born and some of the consultants, the paediatric . . . consultants, are kind of anti the lactation consultants because they feel as though the lactation consultants push way beyond what they should be pushing. Like when the baby is failing to thrive and mothers are getting one hour's sleep per night and being totally stressed. So that's the flipside of that story. (Alice, 34)

They had to really push me to sign this form, and I did sign it, and Olivia took three feeds of formula in the end, and that's the whole formula, the breast milk thing. She had three feeds and I've never been so proud of myself, so that's how I managed to stick it through; three random feeds over a three-week period. I was so upset. I cried when I signed the form. (Ivy, 30)

I cried the first time I went to buy a can of formula. It was late in the evening, too, and I had just . . . you know, how the baby can have a feeding frenzy in the late afternoon and it got to towards 7.00 and I just went "I can't feed her", and just started sobbing, and then I had to go and buy formula and cried all the way to the supermarket and cried all the way home from the supermarket. (Stella, 27)

The formal consent process required to provide formula to a baby while in hospital implied to the mothers that they might be harming their child. Although it was not clear if Ivy consciously grasped why she felt so distressed by the event, it nonetheless troubled her and had a lasting effect on both her and Stella, who also felt demonised by her inability to feed her child and that she "had to go and buy formula".

### ***Loss***

Others described feeling redundant and alone as a result of cessation and using formula milks. Women mourned the loss of being needed and attached to their child,

citing, as Petra (30) did: “I’m just not needed anymore.” Evie had been “struggling with breastfeeding”, and reflected on her experience of introducing a bottle to her baby who was 4 weeks of age. She had been advised by a health professional that she “didn’t have to endure it [breastfeeding] and do this to herself”:

I felt a bit redundant. You don’t need me anymore . . . it’s your milk in there and stuff but it’s just, I don’t know. I don’t think you can put it into words really because you just don’t have that, I guess it’s that closeness that you’re missing out on, that precious little time that you have where they’re feeding and they can look at you and when someone else is doing it it’s like, “well, no, that’s *my* little thing with them”, I think, and it’s that sort of “someone else is taking over that role” slightly, I think. (Evie, 24)

Evie was not alone in feeling redundant and aching for the closeness when breastfeeding stopped and was replaced with bottles. Other women talked of their distress citing how they “I cried and cried” when they first gave their child a bottle, or when they or their partners substituted their breasts/milk with infant formula, visibly grieving the loss of closeness and “that connection you have [with] your baby”.

Feeling like they were missing out by not breastfeeding and “having to formula feed” was a common concern voiced by women across the age spectrum. The closeness and connection was far more important than the more practical elements (good nutrition) associated with “breast is best”. Jessica’s words echoed the longing felt by women when they talked about tendering out their milk, or others feeding their children. Missing out was also an undertone that permeated bottle-feeding, regardless of the milk that was used. This dissection of the body and the mothers’ normative role through a mechanical tool was difficult for women to make sense of.

Some mothers made sense of disembodiment associated with using formula and/or bottle-feeding by trying to ignore what they perceived as value judgments. Women felt as if they “couldn’t win”, regardless of how (breast or bottle) they feed their child. They described experiences where they had been told “cover up” or leave an area when feeding from the breast, or been applauded: “Oh, it’s good to see someone



breastfeeding.” Regardless of their age, mothers talked about bottle-feeding with expressed milk and feeling judged.

To add to the burden of guilt, sadness and loss, feeding (breast or bottle) in public places was a confronting and overall negative experience. It was clear from what the mothers shared that the general public valued breastfeeding as a practice and frowned on the bottle-feeding (and formula-feeding) mother, but neither were visually tolerated. This devalued their physical capital (breast, nipple, milk), their personal feeding choices (breast or formula), and the closeness they felt they gained with their child. It also negatively impacted on how they tried to make sense of not “being able to breastfeed”.

### *Shame*

It was evident from the women’s stories that guilt and shame existed around not being able to breastfeed, and the consequent use of formula and bottle-feeding. As the mothers in the groups talked, they empathised with each other when describing their indignity:

I think everything that you said, but I can’t really explain it, even now if I give him a bottle even just of expressed milk I don’t like it (all of the group agreeing). I feel really bad or guilty, or I don’t quite know how to put it into words, but yeah, just . . .  
(Alexandra, 29)

As the groups progressed, women became more candid in sharing their secrets around feeding their child and how they managed what was perhaps the threat of infant formula. In the following example, Tammy attempts to hide her insecurity and mistrust of her body’s capacity to feed her baby, and talks about avoiding infant formula:

The other thing I did was, I purposely, as a bit of a joke, but I think there’s some truth to it, I purposely never learnt about anything to do with bottles. Like, no disrespect to bottle-feeding, but because I’d made the committed decision to breastfeed my first pregnancy, I didn’t want to know how to sterilise. Like to me, it still seems like a lot of rigmarole and I don’t know how to do it. I mean, I sort of do know a little bit because I sterilise for expressing breast milk now, but yeah, starting off as a first-time

pregnant mother I didn't learn about bottle feedings and formula and how you mix it and stuff like that, because I wanted to keep it complicated and not really an option. Well, not an easy option. (Tammy, 37)

How to use, choose, and purchase formula was hidden from women, which reinforced the feelings of shame when they felt they had "no choice but to use formula". Women like Tammy intentionally withheld and filtered the information she accessed about other feeding methods, perhaps to prevent compromising her own commitment "to breastfeed". Other women, namely younger women, felt that health professionals purposefully did not communicate information in fear that it would encourage them to use formula.

Hiding the information suggested to the women that they were "harming my baby" if they "failed" to breastfeed, reinforcing the shame around using formula milks. Sadly, some women felt they needed information, as Leah (26) stated: "But there's not much information about, to make an informed choice to bottle feed." Millie (28), in the passage below, echoes many other women's concerns about how "sometimes it doesn't work and you have to use formula and I couldn't believe how many there are out there" (Amber, 24). Millie had sadly talked about how she had grieved over "failing" to feed her child, and how getting over it and using formula took a while to be comfortable with while she was faced with the recurrent ruling doxa of "breast is best":

It takes a while, sorry. I feel comfortable, and then I read something, and every second line is to remember breastfeeding is best. Even when I was reading up on the information about the formula milk, and I know they have to do it, it just, every time you feel comfortable with it, you read again and you think "oh God, what have I done?" It's just, there's just so much and I would watch *Sunrise* and they go [on] about it and I watch something else and they go on and on about it, and it just makes you feel crap when it's just, there's no . . . some people haven't got a choice about it, or if they don't want to they shouldn't have to make everyone feel like they are second-rate by doing it. I really hate reading it every time I read something about babies. (Millie, 28)

The indignity felt by many of the mothers when they talked about or used formula—which was felt to be almost a clandestine product – led women to make decisions about formula from a familial and historical perspective, recalling tins they had seen in the shed, or of their own mothers feeding methods: “My mum. Mum fed all [of] us on NAN, and we’re doing alright I think” (Lillian, 21). Similarly, Violet (24), indifferently said that she simply just used the same one she had been fed: “I put Mathew onto the same formula that my Mum fed me.” Sara (30), recalled how she had noticed the old empty tins of S26 under her parents’ house “along with the nails, screws, hammers” (Sara, 30)

Clearly formula has a strong presence in the field of motherhood and adjoining sub-fields (consumerism and biomedical) that applies pressure to mothers’ breastfeeding practices. Its use physically replaces the mother’s breast, milk, and nipples. Like breastfeeding as a product, formula milk is also laced with moral and ethical undertones. These historical and embodied meanings make it difficult for women to value and successfully exchange their physical capital to support their personal feeding preferences. The most harmful byproduct from cessation is tension that generates feelings of loss, regret, shame, and grief.

### **Grief—making sense of things**

This final sub-theme describes how women tried to come to terms with cessation. The mothers’ sense of loss and sadness about early cessation permeated every FG. Overall, women did not make sense of cessation, instead they held onto their experiences of disjuncture as a form of grief, shame, and regret. The following quote is from a first-time mother whose child was four months old at the time. Angela had commenced exclusive breastfeeding and had struggled with pain throughout her experience. She was not exclusively breastfeeding at the time of the FG:

I think – I actually don’t feel that it came as natural to me as what I thought that it was going to, and I think that that mental, like, “you can do this, you can do this”, and “it’s so good for the baby”. And I think early on I was really, really paranoid that I wanted my baby to be breastfed and that’s it, and I will feed and feed until the child doesn’t want it any more. And I really had that stuck in my head, and so when I was off to have a really, really tricky start with trying to get him to attach and [trying to] work out with all the feeds and all that sort of stuff and when you’re really tired, it’s

hard work, and a couple of times I had people say “why don’t you just introduce a bottle” and I thought, “OK, well, I’ve introduced a bottle but I don’t want it to be formula.” I was just really, really anti-formula. I don’t know, because I guess lots of people with formula . . . but I just knew that breast was best and that’s what I really wanted to do to be able to give him the best start. And so when it had to come to make a decision to introduce formula because I just couldn’t express enough for a feed, that’s why I couldn’t – that’s why I needed to give him that formula bottle and not just express and give it to him in a bottle. I found it really – I was also ashamed, I think, that I was giving him formula, and I just think it’s so wrong because I had so many – knew so many people that had just had babies that had, that had made the decision to give them formula and I thought I feel rude that just because – yeah, I just thought that – I’m sure you mothers do get that a lot when everywhere you go they’d say, like, especially older women, say: “Are you feeding him?” And so many times I’ve sort of turned around and go: “Of course I feed him!” Like, I don’t let him starve. Of course they’re referring to if they’re breastfed and I thought – I mean, I know. (Angela, 32)

“Breast is best” is the prevailing rule and dominates the field where women struggle to breastfeed and formula feed, however it does not prevent the emergence of other doxa through day-to-day experience and perceived or real “need to use formula”. Bourdieu questioned whether it was possible to break with the ruling doxa during a time of crisis, of discussion, of questioning. During the complex practice of breastfeeding which is clearly highly variable in nature, this time of crisis is the use of formula. Bourdieu believed other doxic views, such as “formula must be OK for babies because it’s *for* babies”, or ‘NAN is meant to be the closest to breast milk’ could be established (Grenfell, 2008, p. 122). I observed that women transposed the term “best” to the “closest”, in which formula morphed into something that is “closest to breast milk”. Women often referred to how they had trouble finding the “best formula”, being the “one closest to the breast”. Penny specifically cited “NAN is the best one, I mean it’s not as good as breast milk, but it’s the best one I’ve used” (Penny, 23). As players who struggle to convert their embodied physical capital (breasts, nipples, milk) in a complex and heavily competitive field that is underpinned by “breast is best”, the mothers’ acceptance and belief in breastfeeding as best, and their search for the formula that was closest breastmilk, was therefore appropriate. ‘Belief is thus an inherent part of belonging to the field’ (Bourdieu, 1990b, p. 67).

Infant feeding tastes (breast and formula feeding) merge into the habitus as dispositions through this belief. Mothers' adjustment to the tension this caused is evidenced by their marrying the belief "best" with formula milk. It was evident that mothers did not question breastfeeding, as "it's always first choice" because it's "more natural", but when faced with the common dilemma of "not enough milk", "toe-curling pain", and sore nipples, women mistrusted their personal practice, stating as Clara did: "How can something so natural turn your life to hell?" This questioning characterised a break with the ruling doxa.

This "practical sense, social necessity turned into nature" (Bourdieu, 1990b, p. 69), socially and morally transforms formula milk into the backup option in the field of motherhood. For some women, formula did not appear to contradict the ruling doxa, instead it was an accepted, albeit resented, alternative when women felt "I just had no choice I had no milk" (Lisa, 31). Women reacted with guilt and sadness and continued to grieve, saying that "I just wanted to breastfeed". Concurrently, women often acknowledged the practical need for formula "to feed him so he wouldn't starve", however it did not release them from the "gut-wrenching emotion" of cessation (Ellie, 28). These feelings of internal crisis and "anti-formula" resonated with other women's stories of confusion, and feelings of personal and moral crisis and shame.

The "guilt", "devastation", and "sadness" of not being able to breastfeed and depression (specifically postnatal) were spoken about as "separate things". Women were not specifically prompted about depression during the FGs. If women spontaneously mentioned it in the group, the conversation was encouraged by prompting them to "tell us about their experience". In the following quote, Lara tentatively refers to her depression and breastfeeding:

Yeah. I was diagnosed with post-natal depression, and I've been treated for that. I don't think breastfeeding had anything to do with it in my journey, that's why I haven't really talked about it. (Lara, 29)

Initially, Lara stated that breastfeeding and, in her case, not breastfeeding had little to do with her diagnosis of perinatal depression. She then went on to suggest that

depression is contextual and perhaps “normal for all mothers” because of the pressure (conflicting advice, right and wrong ways to feed) from so many competing structural forces. Lara felt that “we lose ourselves” and our “motherly instincts”. The inability to mobilise and make full use of physical capital creates a lasting sense of anxiety, stress, and sense of “personal failure”. Anna (29), joined in and talked about being pulled in multiple directions: “A mother is supposed to breastfeed, be able to be a great wife, care for the baby, lose the baby weight, have sex with their husbands, dummies-no dummies, bottles-no bottles – just so much stuff out there.” These structural pressures all added to the burden that Lara said she carried with her, this “feeling like a failure because I couldn’t breastfeed”. Importantly, she and others had made the distinction between their experience of depression and feeling like failures because they could not breastfeed.

The grief generated through the “failure to breastfeed” was something the women grappled to leave behind. During recruitment and the FG process, I came to understand that distress and grief due to “breastfeeding failure” did not always disappear as children grew older. Of the 50 mothers who contacted us requesting to join the study but who did not meet the recruitment criteria, 12 were aged > 50 years and stated that they wanted to talk about their own experience because “I still feel so sad about not breastfeeding my son” (Field notes.) Many of the older women had asked if we had considered talking to grandmothers (Field notes). Indeed, several of the actual participants during the study stated that that their mothers still felt guilty and sad about not being able to breastfeed them.

Embedded in mothers’ sense of loss was the feeling that something that was “dreamt of just didn’t happen”. Not breastfeeding appeared to break down the self-regulation of the habitus, which enables flexibility for the mother to fit in with the social field of motherhood, where good mothers breastfeed. Young mothers referred to this disjuncture. Charli (23) felt that by others feeding her child for her because “my milk just ran out”, she had not bonded: “I think, ‘I love her’, but sometimes I feel I don’t have the bond, or the bond wasn’t there straight away that I had with my oldest, because I didn’t breastfeed her” (Charli). Similarly, in the excerpt below, Samantha (30) a mother of two who had been persevering with breastfeeding through pain, mastitis, and cracked and painful nipples from birth, talks of how she “grieved” and

“mourned” not exclusively breastfeeding. She struggled, moving between being what she called a “breast-feeder” and “bottle-feeder”, and then was relieved when she ended breastfeeding at 6 months, giving her closure.

So many people said to me “why are you still going? You don’t have to go through this, you can just stop, you can bottle-feed your baby, it’s fine”, but like I say, I think it’s just that . . . it’s something that you always imagined you’d do and you think it’s . . . well it is the best thing for your baby and you romanticise this beautiful idea about this breastfeeding relationship with your baby, and it’s just so much to let go. I think there was a whole grieving process for me around that, around letting go of that dream of this lovely relationship that’s going to happen. So then when she was about six weeks old it got to the point, we were just doing breastfeeding in the morning and it just got to the point where she’d just latch on and just look at me like “what are we doing? There’s not enough going on here,” so I just stopped.

I think by the time it came to actually stopping, I had grieved and grieved about the whole process and I was actually quite relieved in the end just to go OK, that whole entire thing is just over. Also, I found it quite confusing being on part breast and part bottle because you never quite know . . . is she a bit grizzly now because my milk supply wasn’t enough for her, should I top her up with some formula? So much ongoing confusion around that half and half business that . . . I had six months to mourn the whole thing by that point so I was quite relieved actually when that last breastfeed ended. (Samantha, 30)

The end of breastfeeding for mothers was the complete cessation of any breastfeeding. For the mothers in this study, the use of infant formula in the context of a fundamentally normalised maternal embodied process of breastfeeding represented a state of confusion, sadness, and lasting grief. Some women, like Samantha, moved through the grief process over time by doing both (breast and bottle), but many did not make sense of the feelings of their sense of personal failure and maternal disjuncture.

### **What we have learnt: Hysteresis**

The stories and observations collected through the FG study provide a glimpse into the complexity of mothers’ day-to-day negotiations with their own identity, formula and breastfeeding, and the biomedical system. The distress and failure felt by not breastfeeding and using formula are profound and can be explored through

Bourdieu's concept of hysteresis. Hysteresis refers to a disjuncture between practices – what is done, said, and valued. In times of personal, social, and cultural crisis where the habitus (and its multiple dispositions) are faced with abrupt field position changes (i.e. the need to use formula) hysteresis occurs (Grenfell, 2008, pp. 131–134). This concept helps to highlight the disjuncture between habitus (the individual) and field (the society) and the impact on the individual (mother).

The lack of discourse around exclusive breastfeeding as a feeding method suggests that women do not consciously practice it as a way to feed their children in their day-to-day lives. The analysis revealed that what mothers value is feeding from the breast and breast milk. Overall, women interpret the use of formula as “stopping breastfeeding”, and see formula as having an intense background presence, always there as “the option but not the choice”. Women unwittingly associated formula and its use with social disadvantage, bad mothering, and failure, demonstrating that for the mother, breast and formula are two mutually exclusive feeding milks and methods (tastes), by definition and by practice that reproduce symbolic class distinction (Bourdieu, 1984). Not surprisingly, women who set out to breastfeed experience an internal personal and moral conflict (Blum, 2000a) when they cease exclusive breastfeeding through the use of infant formula.

The finding that women across the social spectrum experienced a sense of loss and grief upon using formula is suggestive of disruption in the relationship between the value and ruling doxa (breast is best), the feminine self-identify of good mothering, and the field which no longer supports the mothers' non-breastfeeding practices. This is hysteresis – the mothers sense of being “out of sync” (Bourdieu, 2000, p. 87) with her preference and identity as a mother (maternal habitus), and what actually occurs, which is formula feeding. The unexpected use of formula, as demonstrated in Abigail's narrative (p. 159-160) demonstrates the mothers' inability to mobilise capital to negotiate the sudden change in direction because the field and practice are out of sync with each other. Formula essentially replaces the mothers' embodied capital (breast, nipple, milk), and contradicts the habitus (and its traits), generating a form of negative capital that is no longer valued in the field of motherhood. This leads to mothers feeling shamed, disembodied (Blum, 2000), and conflicted.



The mothers' values around feeding and knowledge of what type of food and nutrition are embodied dispositions of the maternal habitus (Bourdieu, 1984), inherited as cultural capital through biology, history, experiences, advertising, policy, and larger structural regulations such those aligned with WHO (NHMRC, 2013; WHO–UNICEF, 2012). What the habitus helps to make clear is that the dispositions are just that—inherited traits, dormant capital that help to organise women's preferences to breastfeed, establish her identity as a good mother, but importantly do not predict or determine longevity or exclusiveness. They are not deterministic (Bourdieu, 1990b). For example, just because the mother has breasts and can biologically lactate does not mean she will breastfeed. As organs, they enable her with a choice. Similarly, just because the mother prefers to breastfeed does not predetermine that she will exclusively breastfeed. There are multiple factors, as shown in the quantitative analysis, that influence the process and duration after the initiation (Amir & Donath, 2007; Amir & Donath, 2008; Baker, Michaelsen, Rasmussen, & Sørensen, 2004; Bertini et al., 2003; Ladomenou, Kafatos, & Galanakis, 2007; Scott, Binns, Oddy, & Graham, 2006). One direct event that leads to early cessation within the first 6 months of life is the use of infant formula or other foods and fluids as depicted in Figure 2. (Sellen, 2007).

This event suppresses and challenges the exchange of the mothers' embodied physical capital; breasts, nipples, milk. The use of formula deploys the mothers' and families' economic capital. Formula, bottles, and teats are purchased, and new know-how is needed to manage feeding the infant, and deal with one or both of low milk supply and painful nipples. The use of infant formula milk and the equipment needed is a transparent mercantile exchange (Shilling, 2013). It is a means to an end, producing a profit described by many mothers as "he looks healthy enough now". As a social taste and a consumer product, formula is perhaps neither good nor bad but a food choice, and thus plays an important part of the landscape of motherhood and infant feeding (Bourdieu, 1984) Women do understand and believe that to breastfeed is valuable and best because it is "what women do for their child", and what women have done for thousands of years (Dettwyler, 2004). The finding that mothers across the social spectrum valued breast milk and feeding from the breast, along with the high rates of initiation and preface to breastfeeding, affirms that to breastfeed is a historically embodied evolutionary trait and type of cultural capital. The public health messages

promoting breastfeeding as “best and natural” have proved effective in raising awareness (Hawkins, 2014) and thus re-reproducing the maternal habitus over time. The predominant preference to breastfeed over formula feed pre-birth and at birth demonstrates the reproductive ability of this fundamental belief system of the maternal habitus (Bourdieu, 1990b). It also suggests that feeding from the breast is not simply a biologically-derived process, but a complex generative, historical, social, and cultural “set of dispositions” that collectively unconsciously drive the preference to breastfeed (Sellen, 2007). The habitus (and its dispositions) do not work alone, and so the field of motherhood as well as other competing fields (biomedical health and consumer) exert unspoken pressures on the maternal body to breastfeed, to be a good mother, to do the right thing, to be self-sacrificing, and Madonna-like (Bryder, 2009). Together, the field and habitus support each forming a schema of biological, socially-shared beliefs (Bourdieu 1990).

Women assume and feed their children (formula or breast) in the shadow of the dominant doxa—the take-for-granted expectation that “breast is best” and “good mothers breastfeed”. These are internalised as unconscious beliefs affirming that the maternal body and breastfeeding epitomise the natural (Blum, 2000a; Shaw, 2004). Thus the mothers’ preference to breastfeed initially enables a good fit between the values in the field and habitus. Young mothers are often cited as less likely to initiate and to breastfeed (Harner & McCarter-Spaulding, 2004; MacVicar, Kirkpatrick, Humphrey, & Forbes-McKay, 2015), those in this study aligned themselves with the dominant doxa in what I suggest is an attempt to offset the stigma of being a “young mum” and “bad mother” (Afflerback, Carter, Anthony, & Grauerholz, 2013). The preference to breastfeed offers young mothers an opportunity to perform femininity through bodily labour. This demonstrates the young mothers’ agency and the conversion of their physical biological capital into a symbolic form of moral status and distinction. The young mother, for a short time is on equal footing with her older counterparts in the field, this is an important adaptive skill of the habitus, and necessary for the mother to negotiate the changeability of conditions within the field of motherhood, especially for young mothers who through a lack of social, economic, and educational capital are otherwise disadvantaged (Graham & McDermott, 2006; Popay et al., 2003).

Valuing breastfeeding as natural nutrition overtook the sexualisation of the breast, which often competes against the role of the lactating breast (Rivera Alvarado, Vazquez Garcia, Davila Torres, & Parrilla Rodriguez, 2006). The preference to breastfeed is not just a demonstration of healthy food choice, best and good mothering, it is driven by deeper social and historical traits that make up the maternal habitus, unifying women as a social group (Cairns, Johnston, & MacKendrick, 2013; Miller, 2007). This helps to understand that preferences or health-related choices are shaped by beliefs, and have the power to reproduce and migrate across social barriers through time, depending on what is valued most in the field. In the context of infant feeding and motherhood, breastfeeding is most highly valued as cultural and symbolic capital, and thus dominates the landscape.

The biological and evolutionary destiny of the breasts as lactating feeding organs is declared to the mother through the physiological changes that take place in her breasts during pregnancy to prepare her for feeding her child from her breast. Women in the study found this both confronting and affirming, in that it demonstrated that their bodies were preparing to breastfeed. Breasts, nipples, milk are physical embodied capital, resources that may or may not be exchanged by the mother and baby to facilitate breastfeeding. The event of formula use—the cessation of exclusive breastfeeding—essentially replaces the mothers' physical capital. For many women, the breast was perceived as malfunctioning (no milk, not working, broken) suggesting that mothers' identity, agency, and exchange potential was compromised, resulting in a moral crisis. Conversely, a mother's preference to formula-feed demonstrates the individual's agency and control of her embodied resources. As the food and feeding preference "to formula feed" was not the focus of the study, it was not explored further, however it would be important to investigate in future work.

The preference to breastfeed is the mothers' effort to accumulate cultural and symbolic capital, knowledge, and status. The advertising of "breast is best", purchasing of products (bottles, teats, dummies, breast pumps, clothing, websites) are all part of the accumulation process to support and reproduce the "life of the habitus" (Robbins, 2000b, p. 65). The analysis revealed that women desperately wanted to breastfeed, to unconsciously gain the status of a good mother as distinction and capital. This craving creates what Bourdieu refers "phallic modality" (Hage, 2013). Women

“want” to breastfeed. Wanting what everyone else has—or are perceived to have, or have historically always done (breastfeed)—generates a competitive anxiety, internalised as pressure to keep going, to endure through pain and bleeding nipples, which was observed in the study. The mothers’ anxiety and worry about the finality of the abandonment of breastfeeding through infant formula milk supplementation is actually about loss. Mothers objectively focus on “looking outside of their own practice” because of the subjective want and desire to do what is right, and to have what is valuable and threatened (Hage, 2013).

Bourdieu (1984), suggests that scarcity increases value (Bourdieu, 1984). From the analysis, the high breastfeeding initiation rates are possibly a reaction to the threat of scarcity and risk, demonstrating the phallic modality effect. Indeed, our study found that women frequently talked of no milk, or needing to express their milk, and how this attributed to their breastfeeding demise (Cairns, Johnston, & MacKendrick, 2013; Miller, 2007). The threat and scarcity of breast milk (low milk supply), the loss of closeness, and of the lack of women seeing other women feeding from the breast generates the desire to have and accumulate something that has significant value in the field (Hage, 2013). Collectively, these forms of inherited and generated capital (social, physical, and cultural) help the mother negotiate and fit into the new and foreign field of motherhood that she has entered through her pregnancy and the birth of her child.

Motherhood is a contested field of competing ideologies; normal versus abnormal, good versus bad, naughty versus pure, natural versus chemical, and the maternal body as a player in that field is a site of change and risk (Blum, 2000a; Miller, 2007). Fields are articulated social spaces, intertwined with other fields such as the mothers’ social circumstances, the hospital healthcare biomedical settings, and consumerism. As a social arena, women use their bodies and parts of their bodies (breasts, milk, and children) to perform as good mothers. The breastfeeding (lactating) and breast-fed (child) body is a good productive healthy body and a formula-fed child body is a risky one (Dennis & McQueen, 2009). Those women in the study who used infant formula labelled themselves as “naughty mothers”, and thus take up opposing positions in the field of motherhood as “not breastfeeding”. The finding that the women subjectively labelled themselves as “deviants”, “bad”, and “failures”, and were for the most part

shocked by their unexpected need to use infant formula, suggests that infant formula has a habitus, with its own set of dispositions that allow reproduction of the practice. This is consistent with Bourdieu's concept that there is not one habitus but multiple types; individual and secondary, social, and cultural (Grenfell, 2008).

This section ends with the following excerpt from Abigail, a 31-year-old mother of two. Embedded in her heartfelt story is a summary of the complexity of what it is to stop exclusive breastfeeding through the use of infant formula whilst interacting and trying to fit into the field of motherhood. I have chosen this particular example out of multiple others because through Abigail's interpretation of her experience we can see the marks of doxa and habitus ("breast is best" and natural), the field at work, and her struggle with accumulating and converting her physical capital (breasts, nipples, milk). Importantly, we see Bourdieu's concept of hysteresis lived as an experience of long-lasting grief and maternal dysphoria. I suggest that this is breastfeeding grief:

I think, I don't know. I think—I hadn't really thought about it too much except when I got to the hospital, and the nurses were always very lovely, but there was this massive, breast-breast-breast-breast-breast push, like this is what you will do, because this is the best. And that's it. And so then when—particularly with my eldest when I was in a lot of pain, and as I said to my Mum, who's a midwife, and she works in, mother-baby unit at the moment, she just said that, "if you give it a go, and you don't like it, or you can't do it, or it's painful, or it's causing you distress, then you don't do it". Like "it's okay that you've tried, but formula's OK too".

And I was like, "oh no, I can't do that. I can't do that. I really want to just breastfeed." So I think, yeah, there's certainly a massive push, and fair enough, too. Like I guess they've got things to back them up, but there seems to be a massive push for mothers to breastfeed, and I think—yeah, I don't know, and it was hard when I stopped breastfeeding both the boys, because they did have formula. I stopped feeding Sam at six weeks, and stopped feeding Toby at nine weeks, and so they both had formula after that, and I think that there is a society—not always, because there are a lot of people that are open-minded, which is lovely—but I remember it was three days after my last feed with Toby, and we were at a baptism, and I was feeding (bottle) him on the couch at these people's house afterwards, there was like a morning tea, and some old lady came up, and she stroked Toby's hair, he had this beautiful blonde hair, and she goes: "Oh aren't you a beautiful little boy. What a shame your mother doesn't

feed you.” And walked off. And I felt, “my God”. Sorry . . . [begins to cry] it’s been five years, but I cried the whole back from Launceston to Hobart, and then I reckon spent the next three days crying, the next day was Christmas Day, and I just cried, and cried, and cried, and cried, and lay awake, thinking, “for all she knew, I had cancer”. Or, “for all she knew, I was in some sort of mental asylum, because I could . . .”. So I think that was really hard, and I think that there’s—if only everyone was open-minded enough to think, “well, you know, mums don’t ever set out to *not* do the best thing by their babies”. They always, well I would like to think they would always choose what is best for their baby, and best for them, and sometimes – I shouldn’t say it, see I was going to say unfortunately – sometimes, unfortunately, that is not breastfeeding. So gosh, maybe they’ve got [to] me too, unfortunately.

Abigail’s story begins with her challenging herself and the taken-for-granted historically-acquired cultural capital. Like other women, she was unaware of where the notion to breastfeed and “breast is best” has come from, and why she felt breastfeeding was important, whilst acknowledging and feeling intensely committed to doing what was right for her child. These dispositions are in sync with the field of motherhood, and are deeply embedded in the notion of what is socially accepted as good mothering (Popay et al., 2003; Regan & Ball, 2013). We witness through Abigail’s story how women are confronted by the taken-for-granted rules, values, and expectations, and how they place a strain on the mother and lead to self-doubt and demoralisation. This is understood in the context of risk and responsibility, and doing what is right. In reality, it is clear that formula is not accepted by the field of motherhood, and the lack of conversion of physical capital (breast and milk) leave Abigail and others feeling shamed. Abigail’s words resonate with many other women in the study and are laced with regret, sadness, and remorse that she cannot make sense of. The use of formula and fear of doing harm through not breastfeeding rips at her sense of self, and remains with her as a burden of grief.

Through the analysis and Bourdieu’s lens we learn that interrupting exclusive breastfeeding tears at the mothers identity, leaving her with a burden of shame and deep sense of loss. This loss is likened to a grief process that women do not make sense of. The body is physically dissected into parts that have not performed and were sometimes left actually broken. The breast, nipples, milk and the mothers’ social

and personal identity are at odds and often objectified by the public. As Abigail's story relays, mothers don't set out to harm their children by using formula, but instead set out to do their best through breastfeeding.

Formula and breast milk feeding are viewed by women as two mutually exclusive ways of feeding the child, and at opposite ends of the playing field. They compete and antagonise as social statements of good and bad mothering. Starting off as a breastfeeder and trying to breastfeed and then moving to the other end of the field as an infant formula feeder creates internal moral and identity conflict for women. Interrupting exclusive breastfeeding is thus internalised and interpreted as inappropriate behaviour that is "out of sync" with the field. Abigail inferred that "they" have got to her "unfortunately", suggesting that her agency had been compromised by "they" – the collective pressure from the dominant doxic and taken-for-granted view that breast is best.

### **Conclusion**

Cessation of exclusive breastfeeding and the distress felt by many women can be understood as a hysteresis (crisis) effect, where women feel like a "fish out of water" (Bourdieu, 1990, p. 66), confused and conflicted by the reality of their feeding practices. Clearly the field of motherhood and maternal habitus are in sync as they share and mutually reproduce the historical and familial, biological ways and beliefs about feeding the young child (breast as best, natural), yet these are challenged by formula as the "new way of doing things", of resolving feeding problems. However, there is clearly a separation between what the mothers do (practices) and the field. The established field is slow to recognise the change in practices. Mothers are thus unable to gain symbolic capital or recognition as a good mother and that her child is healthy in this space, as formula is not recognised as capital. It is instead the alternative that has significant risk attached to it. For Abigail and others, hysteresis is experienced at a personal level (Grenfell, 2008, p. 139). The moral and personal crisis women allude to and describe when they change from breast to formula is real for them. They move from one field to another rapidly, yet do not possess the dispositions (habitus) to enable the exchange of their capital. From this we can understand that using formula milk is an unsanctioned practice in the field of motherhood, and renders the mothers' physical capital (breasts, nipples, milk) redundant in any other field.

The following chapter uses relevant literature to discuss the key findings and answers the research questions. These are outlined in point form first before moving onto the discussion, followed by a short conclusion at the end of the chapter.



## 6. DISCUSSION

---

The body believes in what it plays at: it weeps if it mimes grief. It does not represent what it performs, it does not memorize the past, it enacts the past, bringing it back to life. What is learned by the body is not something that one has, like knowledge that can be brandished, but something that one is.

Pierre Bourdieu, *Logic of Practice*, p. 73

---

The aim of this thesis was to identify the key factors associated with the cessation of exclusive breastfeeding in Australia, using secondary data from the 2010 Australian Infant Feeding Survey (AIFS), and to better understand women's experiences of cessation of exclusive breastfeeding using qualitative FG data with 108 mothers aged > 16 years. This discussion chapter integrates the quantitative and qualitative findings. A summary of the key findings is first presented, followed by a discussion of different aspects of results' that hold particular relevance for current evidence and thinking around the issue of exclusive breastfeeding and cessation and for the application of Bourdieu's theory. At the end of the chapter the study limitations, and public policy and health implications are outlined.

### **Major Integrated Findings**

Despite a larger proportion of women preferring to 'breastfeed' and initiating exclusive breastfeeding, few women in the study exclusively breastfeed at 6 months. Both studies highlighted the lack of sustained exclusive breastfeeding, and consequently highlighted the use of infant formula to substitute for breastfeeding and breast milk. Mothers do not recognise exclusive breastfeeding as an everyday method to feed their young children. Exclusive breastfeeding' is a socially constructed concept that I argue belongs to and within the contemporary biomedical field. Consequently, the term exclusive breastfeeding means very little to mothers. What is important to mothers is 'to breastfeed', which is interpreted by women as physically feeding from and at the breast. Women value this method of feeding over all other methods (bottles, expressing) or milks for the closeness it generates between their child and themselves, and the notion that it is natural and best for their children. Their

own needs are relatively absent and the focus for mothers is on the child, and doing what is best for them.

Secondly, multiple factors influence early cessation within the first 6 months of the child's life. The father/partners' infant feeding preference and regular use of a dummy are two key factors found to most significantly increase the risk of early cessation. The qualitative findings add support to the quantitative results about the importance of the father/partners' views on infant feeding methods by illustrating how mothers attempt to mobilise their partners as allofeeding tools; forms of capital that help the mother to continue to breastfeed and negotiate the demands of infant feeding (breast and formula feeding).

Thirdly, a diagnosis of prenatal depression increased the risk of cessation. It is not clear, however, if postnatal depression precedes cessation or is in fact the product (to some extent) of breastfeeding problems and cessation. Mothers demonstrated a state of emotional dysphoria when describing their experiences of cessation. Dysphoria is defined as a profound state of uneasiness and dissatisfaction, and may accompany depression and anxiety (American Psychiatric Association, 2000). The analysis revealed that breastfeeding women suffered as they struggled to breastfeed and to avoid infant formula. Mothers experienced feelings of failure, shame, pressure, anxiety, and fear, which reproduced a type of grief when interrupting exclusive breastfeeding (using infant formula) within the first 6 months. The use of infant formula metaphorically separates the mother from her habitus (embodied dispositions and value of breastfeeding), from her breasts, nipple, milk, and her child, resulting in a crisis, or as Bourdieu suggests, a hysteresis. This is a disjuncture between the maternal habitus, embodied capital, and field of motherhood. This leaves women with a burden of unresolved "breastfeeding grief", a maternal dysphoria that is a mental health issue and requires further exploration.

### Summary of Findings

- Few women exclusively breastfeed at 6 months, with half of the women who started stopping before the first 2 months.
- Although multiple factors are associated with interrupting exclusivity, the three key factors that resonated with the qualitative findings are:
  - Mothers' partners' infant feeding preference was significantly associated with feeding the infant formula or other foods before 6 months. Their preference for bottle-feeding, or having no preference, was most strongly associated with cessation.
  - Regular dummy use increased the risk of cessation.
  - Mothers who reported that they had been diagnosed with perinatal depression were at increased risk of cessation.
- The mother's socioeconomic status did not prove to be highly significant.
- Women do not understand the biomedical public health category "exclusive breastfeeding" as a way to feed their children. Instead they set out to breastfeed and value this above all other feeding or milks.
- All mothers across the social spectrum valued the preference to breastfeed as natural and best for the child. Valuing breastfeeding as natural and best is the guiding historical and familial disposition of the maternal habitus and is underpinned by the taken-for-granted social view (doxa) that "breast is best".
- Women employ two contemporary forms of allofeeding (other feeding):
  - Others – partners or fathers and non-maternal tools.
  - Dummies, teats, and bottles.
- Infant formula and bottles generate a negative capital with little profitable return for the mother.
- Mothers carry a burden of unresolved grief. I suggest this reflects a form of maternal dysphoria, and express this as "breastfeeding grief", requiring further exploration.

### **Cessation**

The data reported in this mixed method study found that half of Australian mothers who initiated exclusive breastfeeding at their child's birth stopped exclusive breastfeeding in the first two months, while three-quarter has ceased at four months.

These results, from a nationally representative sample of mothers and infants, were confirmed in the Tasmania-based FG study which found that the majority of participants had reluctantly and unexpectedly used infant formula milk to feed their infants and young children, consequently interrupting exclusive breastfeeding.

The findings are consistent with the reported rates from other developed country settings (the United Kingdom, the United States), showing that despite an increase in the number of women preferring to breastfeed, there continues to be a decline—and even a stagnation—in the number of infants exclusively breastfeeding to 6 months (Boiling et al., 2010; Li, Darling, Maurice, Barker, & Grummer-Strawn, 2005). The lowest rates are estimated to be in upper-middle and high-income countries such as Australia (Victora et al., 2016). In light of the 56th World Health Assembly global target for 2025 “to increase exclusive breastfeeding in the first 6 months to at least 50%” there is clearly a need to re-examine how exclusive breastfeeding is promoted and how women are supported.

This study confirms that exclusive breastfeeding is not a common practice (Victora et al., 2016). The low rates suggest that more infants are supplemented with infant formula milk before 6 months than are exclusively breastfeed. Of greater concern is the finding that half of the women who cease (by using infant formula milks or other fluids) do so within the first critical two months of their infant's life, when the infant is susceptible to immune and metabolic programming (Gura, 2014; Hooper, Littman, & Macpherson, 2012). Some evidence suggests that even the smallest amount of formula milk can permanently disrupt the immunological homeostasis at the gut's mucosal surface (Backhed et al., 2015), predisposing the child to metabolic disease (Bhutta, 2013). That the value of exclusive breastfeeding is undermined by the aggressive marketing and growing assumption that formula milk can replace breast milk, with no long-term health or economic impact is also a great concern (McFadden et al., 2016; Rollins et al., 2016). A recent meta-analysis suggests extended breastfeeding could prevent up to 87% of deaths of infants younger than 6 months,

and may reduce breast cancer mortality, obesity and metabolic diseases (Victora et al., 2016). In view of the benefits of sustained exclusive breastfeeding (Becker, Remington, & Remington, 2011; Binns & Lee, 2014; Horta, Victora, & WHO, 2013; Kramer & Kakuma, 2012), ongoing commitments to reduce the reliance on infant formula milks and protect breastfeeding are required. In view of the health benefits afforded to both mothers and infants and young children, the continued promotion and support of exclusive breastfeeding to 6 months remains both important and essential, particularly as women's (or families) infant and child feeding choices continue to be commodified by the aggressive marketing of infant formula milks (McFadden et al., 2016).

In terms of women's understanding of exclusive breastfeeding, little attention has been given to how women interpret the concept of *exclusivity* as an infant feeding practice in their day-to-day lives, or the meanings they give to the practice. One of the most intriguing findings from the qualitative study was the absence of the biomedical public health construct "exclusive breastfeeding" when the women talked about how they were feeding. Women across the social spectrum did not refer to "exclusivity" as a type of breastfeeding, or as a way to feed and bond with their child, unless specifically prompted. When prompted they questioned its reality and relevance to their personal practice, likening it to didactic and sometimes conflicting instructions from health experts (for example, to breastfeed for 4 months, or for 6 months). Conversely, 'to breastfeed', and the *act* of breastfeeding, was highly valued by the women in this study.

The disjuncture perhaps can be explained by reflecting on the public health discourse used to inform women about exclusive breastfeeding. The mothers in this study perceived the term *exclusive breastfeeding* as a public health instruction or rule, that did not reflect what they did in the context of their lives. I argue that for women, exclusive breastfeeding is not what they understand "breastfeeding" to be. Instead, it is assumed to be an optional practice, because it is framed as biomedical construct. As a type of biomedical cultural capital, exclusive breastfeeding thus belongs to the biomedical field where it is generated and legitimised through health experts' knowledge, and technical instruction of "doing things right", and clinical practice

policies such as the BFHI, that aim to promote and support breastfeeding (UNICEF, 2016).

The lack of acknowledgment of the breastfeeding promotion and public health/biomedical discourse around infant feeding into the mother's day-to-day feeding reveals a subtle disjuncture between subjective (mothers) and objective (biomedical/public health) realities (Bourdieu, 1990). I suggest that what women do and are interpreting generically as "to breastfeed" (feeding from the breast) is out of sync with the dominant public health ideologies espoused by health institutions, experts, and global policies such as the BFHI and the World Health Organization's global strategy. As a scientific, public health, and biomedical notion, exclusivity is thus problematic for mothers (Hoddinott, Craig, Britten, & McInnes, 2012). As a discrete infant feeding category, exclusive breastfeeding is at the heart of the WHO–UNICEF BFHI policy to limit "sub-optimal" feeding practices and monitor infant feeding at a population level (WHO–UNICEF, 2012). These "rational measures" act to control and monitor individual and group practices by shaping individual, and institutional-health professional practices, and social norms that pit one against the other: healthy versus unhealthy, natural versus unnatural, good versus bad (Petersen & Lupton, 2000, p. 29–30). Bourdieu sees this as "class classification". In the context of breastfeeding, the dichotomising and scientific categorisation of a deeply personal and subjective experience is used as cultural capital to regulate and map mothers' infant feeding practices, and in turn, the mother and her child, and their bodies (Bourdieu, 1984). However, as I have shown, for the women it has little or no currency in their lives. They do not appear to incorporate exclusive breastfeeding into the maternal habitus.

Bourdieu's theory helps us to understand that as a modern health category, exclusive breastfeeding is not easily reproduced, and is rejected by mothers in their day-to-day lives because it is outside the logic of the field of motherhood, where to breastfeed (to feed from the breast) is the taken-for-granted way of feeding infants and young children. The preference to breastfeed, or to provide breast milk, can be viewed as social cultural and personal currency for women used to navigate their experience of motherhood (Bourdieu, 1996). These findings reflect that breastfeeding is a product of embodied history, it is changeable and responsive to the mothers' social, physical and

cultural context, and thus not a health policy that can be easily operationalised. Consequently, the instruction to exclusively breastfeed does not make sense to women, or reflect what they do with their bodies.

Whilst women in our study exclusively breastfeed when under the watchful care of health practitioners, they did not adopt exclusiveness after discharge. This was reflected in the low proportion of infants exclusively breastfeeding in both studies. The mothers lack of understanding of—and dismissal of—exclusivity as a health regulation or condition implies that the “class system” designed to instil order and control the maternal and child body fails. The scientific biomedical “categories” and associated discourse do not resonate with what mothers do on a day-to-day personal level (Foss, 2010).

In summary, the public health ideologies underpinning the notion of exclusive breastfeeding are out of step with what mothers do and experience in reality. Together with the low rates of exclusive breastfeeding, this suggests a poor translation of breastfeeding health policy and education, and a lack of maternal confidence in the biomedical field. These findings are important for informing the approach health professionals and lay support organisations take when educating women and their families. The finding that women across the social and age spectrum in the study chiefly set out to breastfeed is evidence that women endorse the socially-normalised value of “breast is best”. It also demonstrates the pursuit of maternal self-interest (Blum, 2000c); women prefer to breastfeed because they want to and because it is important to them, not because they are instructed to breastfeed by health policies. This may help to theorise the impact of larger structural issues underpinning the phenomena of early cessation of exclusive breastfeeding.

### **To breastfeed**

This study confirms the national infant feeding trends, where the majority of women set out (have the intention) to breastfeed (AIHW, 2011a). Bourdieu helps us to see that mothers’ preferences are derived from the embodied maternal habitus. The intention to breastfeed is thus an unintentional, objectively-organised strategy, a structure organised by past conditions (maternal habitus) and larger structures (biomedical and consumer fields) (Bourdieu, 1990, pp. 6, 70). Importantly, the

preference to breastfeed is a “way of being”, but not what women do. Thus, to breastfeed is a key trait of the maternal habitus, and this acts as guide to their practices, beliefs, and values, but does not determine outcome, or exclusivity (Grenfell, 2008).

To breastfeed is the taken-for-granted normative value underpinning motherhood and femininity, symbolising the productive and socially appropriate use of the maternal body (Blum, 2000a). These become embodied dispositions, mutually reinforced by the nutritional and nurturing capabilities that breastfeeding and breast milk provides. The complexity of the woman’s experiences in this study reflected the multiple dispositions of maternal habitus, and how these collectively guided how they did or didn’t make sense of cessation. One way of making sense of cessation was to openly value breastfeeding above all other feeding methods and milks. As Bourdieu explains, the habitus favours experience that is likely to reinforce its dominant traits (Bourdieu, 1990, p. 61). Thus the “subjective intention” to breastfeed is a dominant trait and mutually reinforced by the doxa and the historical and social grounding of the habitus. It is, essentially, a *fait accompli* of motherhood (Bourdieu, 1990). This helps to theoretically explain the high prevalence of intention to breastfeed amongst the women. It also demonstrates that the preference to breastfeed is not simply a feeding choice, but a socially and historically-constructed characteristic that women value. It also generates—as this study has found—a multitude of multifaceted experiences (Frerichs, Andsager, Campo, Aquilino, & Stewart Dyer, 2006; Murphy, 2003).

The finding that women principally set out to breastfeed, which they interpreted as feeding from the breast, is evidence of the reproduction of dispositional habitus and its multiple traits (Bourdieu & Wacquant, 1992). The analysis revealed that women framed their preference to breastfeed or not breastfeed in an array of contexts including maternal altruism, self-sacrifice (doing what is best for the baby), health and nutrition, natural/unnatural, and as evolutionary—something women have done for ever. In keeping with previous work, women in this study clearly wanted to breastfeed, and embodied this preference as a deeply-held natural desire. To breastfeed reflected their identity and notion that natural is equal to good mothering (Marshall, Godfrey, & Renfrew, 2007; Stearns, 1999). Conversely, this study also revealed that the infant & child feeding-motherhood landscape is divisive, where ‘breastfeeders’ are good and



bottle formula feeders are “naughty”, and viewed as doing something socially and morally wrong “like unprotected sex”. As a consequence, when exclusive breastfeeding is interrupted (through formula feeding) mothers marginalise themselves as unnatural and dirty because they and their bodies do not conform to the social and cultural ideals of good motherhood (Marshall et al., 2007; Regan & Ball, 2013; Ryan, Todres, & Alexander, 2011).

The mothers’ unquestioning personal belief in breastfeeding and breast milk as being natural and therefore an expected aspect of motherhood is closely tied to the faith in science as the source of reason (Bourdieu, 1990b, p. 178). In this context, the mothers’ preference to breastfeed is thus accepted as a natural, unquestionable consequence of biology (Blum, 2000b). However, breastfeeding represents an axiological issue, as it is laced with historical moral and ethical traits, and yet highly valued as a deeply embodied act of instinctive motherhood (Regan & Ball, 2013). This current study confirmed that to breastfeed does not have fixed technical meanings that dominate the current biomedical discourse, but is interpreted subjectively and experienced by women in multiple counterintuitive ways (Blum, 2000a, p. 38). This reproduces the trait of self-sacrifice, where mothers prioritise the health of their child over their own suffering, pain, and the trauma of not breastfeeding (Murphy, 2000), suggesting that although mothers chiefly believe that to breastfeed is best for their children, they experience breastfeeding and lactation paradoxically; as natural, “best”, joyful yet difficult, and painful, and see formula as an unwelcome necessity that generates mistrust in the body (Afflerback et al., 2013; Blum, 1993).

The analysis suggests that many women internalise feeding from the breast as a deeply-held maternal right (Ryan et al., 2011). Women held on to this as a self-directed desire, symbolising personal achievement (Blum, 2000a), suggesting that breastfeeding has taken on the status of a “narcissistic hedonistic” taste akin to what Featherstone (2003) refers to as “new self”. This is where the agents’ need for self-fulfilment and embodied performance generates practice (Featherstone, 2003). It was clear from the study that women desperately wanted to breastfeed and that as a narcissistic taste it drove their practices and this impacted on how they negotiated cessation. Women cited trying everything to fulfil the intense subjective desire to breastfeed, sometimes at theirs and their child’s personal cost. They did not

understand why they felt it was so important to breastfeed. Their intense desire to breastfeed reflects the power of the embodied traits of the maternal habitus, helping women prioritise their preferences. Bourdieu's notion of practice helps us to understand that the mothers' subjective intent to breastfeed was not simply a personal nutritional health choice (Williams, 1995). Nor was it an automatic role taken on because of their gender (Schmidt, 2008), rather it is a function of the maternal habitus. The habitus works at a subconscious level hidden from the agents' awareness (Robbins, 2000b), which is why women could not always rationalise its importance in their lives. It is important for health professionals and public health education to take this into consideration, understanding that to breastfeed means more to women than doing what is perceived as right and best for the baby. For some women, it is a deeply-held private and personal taste that is difficult to articulate.

Mothers' feelings of dissatisfaction and failure when their preference to breastfeed and breastfeeding "didn't work out" may have less to do with contradicting the moral and normative value of "breast is best" (Sheehan, Schmied, & Barclay, 2010; Wolf, 2007), and instead reflect the newly-emerged trait of the maternal self as a performance project. Featherstone describes the emergence of the "outer self" as self-conscious, chronically uneasy, afraid of becoming unhealthy, ill or diseased, and dissatisfied (Featherstone, 2003, p. 123). These traits were reflected in the qualitative study findings, where women who had ceased exclusive breastfeeding by introducing formula feeding projected their dissatisfaction and fears onto their child's health. This generated bodily insecurity and chronic anxiety over their bodies, and their baby's body's inability to perform as "healthy" in public and private settings by successfully breastfeeding. These complex and multifaceted findings from the mother's experiences help to illuminate that the preference to breastfeed is more than a personal choice, it is a product of the new self, and a deeply-held embodied disposition. It does not determine the outcome of exclusivity, but reflects past and present conditions of the field.

### **Allofeeding: Fathers and dummies**

Consistent with other studies, multiple factors are associated with the early cessation of exclusive breastfeeding (Al-Sahab, Lanes, Feldman, & Tamim, 2010; Cai, Wardlaw, & Brown, 2012). The quantitative analysis has shown that the most

strongly associated factors were father/partner preference, and regular use of a dummy. Australian mothers and their infants who initiated exclusive breastfeeding and whose partners preferred bottle-feeding, had an 86% higher risk of ceasing compared to those whose partners preferred breastfeeding. Similarly, when partners were indifferent to how the child was fed, mothers and infants were 37% more likely to cease than those whose partners preferred breastfeeding. This relationship may reflect partners' feelings of marginalisation during the breastfeeding process (Freed, Fraley, & Schanler, 1992), and confirms that partners' views have a significant impact on infant feeding practices (Freed et al., 1992; Jessri et al., 2013; Tohotoa et al., 2009). Father/partners also dominated the mothers' experiences of cessation in the qualitative study. Engaging the support of partners is likely to be critical in increasing rates of exclusive breastfeeding.

A strength of this study is that the broad nature of the data enabled nuanced meanings from the mothers' experiences to become apparent. Mothers in the study valued the assistance and support provided by their partners, yet struggled at times to mobilise them as a positive resource (form of capital) during breastfeeding/infant feeding. This suggests that although regarded as important, partners often remain marginalised from breastfeeding. This may be attributed to a lack of 'know-how' to firstly convert any social and cultural capital, and then to a direct shortage of infant feeding knowledge. A recent study of mothers at 1 month and 6 months found that women were less likely to use infant formula at either point when fathers were provided with support and education about exclusive breastfeeding during the antenatal period (Su & Ouyang, 2016). The mothers in this Chinese-based study also reported that father's involvement was an unexpected resource, as they provided support by taking care of the child, doing housework and emotionally supporting the mother (Su & Ouyang, 2016). Mothers in my qualitative study indirectly referred to the pair-bonded stable relationship on mothers and the fathers of their children as valuable capital, persistently remarking that they could not do it [breastfeeding] without them. However, the exchange of this capital and the mechanisms required could not be assessed due to the broad nature of the data. For many women, a pair-bonded relationship was a resource that gave them relief, time, and emotional stability during times of cessation and crisis. Consistent with other research, my analysis suggests that partners have a valuable place as a resource in the context of influencing mother's

preferences and ability to manage the way in which they feed their young children and family (Rempel & Rempel, 2011). How this resource is maximised and translated is likely to be a fruitful area for further social research.

Whilst fathers are valued by mothers in different ways, the father's place and role remains secondary to that of the mother and health professionals (Fox & Worts, 1999; Hofner, Schadler, & Richter, 2011). The father as a male has historically been pushed to the side and given the place of observer during pregnancy and birth. Consequently, they have not been viewed as equal participants or active emotional agents (Palkovitz, 1985), and the father's place in the field has been confined to the traditional "breadwinner" role (Millar, 1999). Schmidt (2008) suggests that breastfeeding assumes the role as a biologically-gendered practice (Van Esterik, 2002), excluding the male/father of the child since he cannot lactate (Schmidt, 2008). As women spoke about what helped them to negotiate cessation, they cited the valuable contribution that fathers made to their ability to manage the emotional pain of not breastfeeding and having to use infant formula. This relationship was more important to the women than any other encounter. Fathers' lack of voice and active presence in the process of breastfeeding cessation is perhaps reflective of this. Based on the finding that women expected and valued the fathers' contribution as allofeeders, infant feeding should be viewed as collective family process akin to the concept of pair-bonding. In this way, mothers and fathers are partners in the transition to parenthood and meeting the needs of their family (Quinlan & Quinlan, 2008; Rempel & Rempel, 2011). The findings from this study highlight that the fathers' place as "breastfeeding fathers" or "formula feeding fathers" is poorly understood and lacking in the literature.

My finding that mothers viewed fathers as an essential resource, and attempted to deploy them as capital (allofeeders), is consistent with other work, showing the positive effect fathers' support and involvement has on maternal wellbeing and depressive symptomology (Tissot, Favez, Ghisletta, Frascarolo, & Despland, 2016). Breastfeeding is more likely to be sustained with intimate partner support and engagement (Quinlan & Quinlan, 2008). The father of the child offers a "bi-parental" approach in negotiating and managing care, and the feeding demands of the dependent child (Blaffer Hrdy, 2009). For many of the women in the qualitative study, the experience of feeling isolated, burdened by the demands of breastfeeding, "being

the only one”, and then failure (not breastfeeding, using infant formula), was often mitigated by a positive relationship with the father/partner. Indeed, cross-cultural evidence suggests that pair-bonding (intimacy of the relationship) is protective of breastfeeding (Quinlan & Quinlan, 2008). This is an unexplored area in regards to breastfeeding and infant feeding in modern society, where the roles have been assigned to biology or are skill-based.

From a Bourdieuan perspective, the mobilisation of the father’s own physical and social capital (such as time, emotions, and physical body) not only offers the exchange in the form of pair-bonding (Quinlan & Quinlan, 2008), but relieves and conserves the mother’s energy (capital), while simultaneously increasing the breastfeeding family’s social and emotional stability and collective combined capital. This will, of course, depend on the quality of the pair-bond relationship. For mothers who lack secure intimate relationships, as many did in the qualitative study, or those whose partner preferred or were indifferent to bottle feeding, the risk of cessation is greater. Having no intimate relationship to draw from produces a negative effect, potentially destabilising and rendering the mothers’ capital redundant. Indeed, for capital to be of use in the field it must be exchanged for a profitable return (Robbins, 2000a). Here lies an opportunity for health policy and clinicians to increase the fathers’ and family’s infant feeding knowledge (cultural capital) through antenatal education, engaging the allofeeding concept where both mother, father and extended kin relationships are considered co-dependent. Combined support strategies improves longevity of breastfeeding in the first 12 months (Reid, Schmied, Sheehan, & Fenwick, 2013; Renfrew, McCormick, Wade, Quinn, & Dowswell, 2012). However, breastfeeding is still framed as a mothers’ sole duty, which fails to take into account the desire of the father to be an active member as he is in other aspects of everyday life such as cooking and food preparation, and caring (Blum, 2000a; Lupton, 1996). Rethinking infant feeding and breastfeeding as an everyday process, and thus engaging the support of the mothers’ kin as allofeeders, is likely to be critical in increasing rates of exclusive breastfeeding and supporting mothers during their feeding experiences. There is a gap in the evidence regarding the fathers’ view of breastfeeding, and how the partner/father of the child negotiates breastfeeding and what it means to them as a parent and individual.

***Other allofeeding: Dummies, bottles, and teats***

Women deploy many forms of non-maternal allofeeding tools to help them negotiate cessation. This study found that these were dummies, bottles, teats, and expressing equipment. The use of dummies in the context of infant feeding and breastfeeding is complex and difficult to unravel. The relationship between dummy use and breastfeeding outcomes is inconclusive, as is the causal relationship (Jaafar, Jahanfar, Angolkar, & Ho, 2012; O'Connor, Tanabe, Siadaty, & Hauck, 2009). This current study reveals antagonistic findings. From the quantitative study, and consistent with previous observational research, regular dummy use within the first 6 months is associated with cessation of exclusive breastfeeding in Australian mothers (Al-Sahab et al., 2010; Binns & Scott, 2002; Howard et al., 2003; Scott et al., 2006). The direct mechanics involved in how the use of dummies negatively affects breastfeeding success is unclear, and mothers' or fathers' perspectives regarding the use of dummies is lacking in the literature. Observational studies support the belief that dummy use interferes with breast milk production, lessening the frequency of sucking at the breast before the mothers' milk supply is established (6–8 weeks) (Howard et al., 2003), and creates nipple confusion which deters the child from sucking at the breast (Gomes, Trezza, Murade, & Padovani, 2006).

O'Conner (2009), points out that dummy use may be a marker for breastfeeding problems, and that mothers resort to dummies as a way of coping with child fussiness and managing weaning (O'Connor et al., 2009). Importantly, the findings from this current study and other observational research do not infer causality, but reveal an observational relationship between dummy use and the cessation. Evidence is needed regarding the effect of the dose (frequency of use) and timing (age of the child) of dummy use for breastfeeding children.

There is a dearth of research on how mothers and fathers experience using dummies while breastfeeding. This is one of the first studies to document the use of the dummy from the mothers' perspective. In contrast to the findings from the first phase of the study revealing a negative relationship, for the mothers in the qualitative study, dummies were experienced as an accepted common resource. Dummies were utilised during the infant feeding process to help mitigate common postnatal infant problems, such as the unsettledness, fussiness, and feeding difficulties (Kramer et al., 2001;

O'Connor et al., 2009). I suggest that the dummy and its use is a form of consumer capital, exchanged as a useful and common tool. It is essentially an everyday allofeeding tool that is used as a non-maternal resource to alleviate some of the demands of early parenting.

Capital is commonly considered a lineal resource producing a direct profitable exchange in the form of elevated social-status, emotional, or economic reward (Robins, 2000). The gain to the agent is relative to and influenced by the values of the field (Bourdieu, 1990, p. 67). In the field of motherhood, the dummy and the bottle have a contested but accepted place as a routine lifestyle choice and “mothering” utensil. Mothers in this study did not appear to gain any social affirmation or elevated status from their use. A possible explanation is that the dummy and bottle may be symbolic of inadequate parenting, uncleanness, and infection (Gillies, 2005; Lawler, 2005), and of social disadvantage (Whitmarsh, 2008). Although the mothers in this study cited the dummy in particular as dirty, and the health regulations that recommended against their use (Baby Friendly Health Initiative Australia., 2007b), women appeared to negotiate and accept their use in light of these views.

Graham (1987), found that single mothers used smoking breaks in a similar way. Although understood as “unhealthy”, smoking offered the women what I argue is a form of non-maternal allomothering; a break and some emotional space from the full-time demands of caring (Graham, 1987). In this context, bottles, teats, and dummies perform a similar function: As consumer products, they are endorsed and valued through the biomedical and consumer fields, which is underpinned by biomedical research, which advises that the use of dummies at bed time may decrease the risk of sudden infant death syndrome (SIDS) (Hauck, Omojokun, & Siadaty, 2005), and useful for settling and relieving neonatal pain (Carbajal, Chauvet, Couderc, & Olivier-Martin, 1999). This may help explain why the women in this study employed the dummy and bottle as allofeeding mothering tools—they openly felt that their use may help them cope with the 24/7 physical and emotional demands of breastfeeding and early parenting. Allofeeding tools such as dummies, teats, and bottles are contentious, however it is worth considering that their use may not cause cessation but instead is potentially a “flag” for maternal fatigue, and problems with infant feeding or settling rather than causal (Kramer et al., 2001). In this context, it is not surprising then that

women did not cite emotional distress or feelings of failure when using or purchasing dummies, bottles, and expressing equipment, as they did with infant formula.

Although using bottles or teats and dummies is generally discouraged for breastfeeding mothers (UNICEF, 2016), from the women's narratives, dummies are a commercial resource purchased and used with confidence because they are perceived to mimic the embodied traits of the lactating and maternal breast. Women appeared to value their objective disposable contribution, suggesting that the dummy and its use are very much part of the "kitbag" that women feel is necessary to play the game of trying to breastfeed. Dummies are an accepted consumer product and type of capital used to negotiate the transition to motherhood and feeding young children. Given the association between regular use and cessation of exclusive breastfeeding it is important to understand how and when to introduce a dummy to a breastfed child. Future research is needed to explore the views and experiences of mothers and fathers of using dummies during infant feeding. This information may be useful for designing education programs around infant feeding, in particularly the use of dummies during breastfeeding.

### *Expressing*

The way women manage their bodies' physical capital (breasts, nipples, and milk) during breastfeeding and cessation tells us a great deal about the use and construct of the maternal body (Stearns, 1999). Consistent with other work, expressing breast milk and the employment of non-allofeeding tools and equipment (bottles, teats, breast pumps) offered women in this study, a profit in the form of reassurance that the baby was being fed, and facilitated time out, the conservation of maternal energy, and gave fathers bonding time with their baby (Earle, 2002; Johnson, Williamson, Lyttle, & Leeming, 2009). In this way, the women doubled their profit from the transaction, retaining the outward social status of "good" mother and wife demonstrating the manufacture of the "good" lactating/maternal body through the continued provision of breast milk, and that her baby was happy, gaining weight, and well fed (Stearns, 1999). Thus breast milk as a type of physical capital is operationalised as a shared resource by women and biomedical health experts. It is essentially an exchange process that generates symbolic capital.

Conversely, during cessation, the use of non-maternal allofeeding generated negative



capital: anxiety, personal depreciation, and feelings of remorse. Women cited that their bodies and identity were being “replaced” by the breast pumps and bottles, even when the father of the child took over the role as the primary feeder. The use of “techno-medical” expressing equipment is constructed and therefore experienced as a way to control and techno-medically manage the inefficiencies and inadequacies of the lactating, leaky, maternal body (Bartlett, 2002; Dykes, 2002). The disembodiment that their use generates contradicts the potential benefit women may attempt to gain through their use during breastfeeding (Johnson, Leeming, Williamson, & Lytle, 2013). Bourdieu’s notion of capital demonstrates that mercantile techno-medical consumer-type capital such as bottles, teats, and expressing equipment are only a valuable resource to mothers if they fit into and generate status within the field and produce a profitable exchange (Robbins, 2000a). Although accepted as necessary by women, they also symbolise maternal barrenness, and bodily malfunction (Sheehan & Bowcher, 2016) in the field of motherhood, accounting for women’s shame when using bottles in public places.

Breastfeeding women struggling with common problems (pain, low milk supply, low infant weight gain) associated with cessation (O’Brien, Fallon, Brodribb, & Hegney, 2007; O’Sullivan, Perrine, & Rasmussen, 2015), may gain little social capital from non-maternal allofeeding tools. Cessation of exclusive breastfeeding and the subsequent use of bottles, dummies, and expressing equipment to manage this event represents the failed, unreliable maternal body that needs to be brought under control (Bartlett, 2003). Women experienced authoritative ridicule for their use from the general public and health professionals alike (Blum, 2000b). The use of controversial allofeeding tools breaches the dominant doxa and normative construct of “good and natural” mothering, reproducing maternal feelings of disembodiment and shame (Whitmarsh, 2008). These findings suggest the use of non-maternal capital generates a type of negative capital in the form of ridicule and guilt, exposing mothers to judgment and misrepresentation—“bad mothering” (Johnson et al., 2013). The mothers’ experiences of using non-maternal allofeeding tools to negotiate breastfeeding and cessation are evidence of symbolic violence where the social and cultural symbolic meanings attached to techno-medical tools subversively legitimises both their use as essential mothering tools and suppresses the agent’s bodily control (Bartlett, 2003; Grenfell, 2008, p. 152). I suggest that the use of non-maternal

allofeeding tools perhaps do not cause cessation; if understood in the context of a resource that has the potential to generate both positive and negative gains, mothers and their families may feel more supported during times of crisis when using these tools.

### **The lactating body**

The performance of the maternal body has been the site of debate, control, and monitoring for decades (Blum, 1993; Foucault, 1980; Martin, 1990). Lactation and breastfeeding is viewed as biological consequence of the maternal pregnant body, and of being female. In this context, breastfeeding has become a technological project where public health and medical/scientific, education, physiological, and marketing approaches are applied to control and monitor breastfeeding for practical, commercial, and health promotion purposes (Dykes, 2002; Johnson et al., 2013). Based on the findings of this study and others, it appears that the modern, lactating, breastfeeding body no longer belongs to the mother, but is operationalised—manhandled, squeezed, expressed, and assigned medical conditions such as engorged, infected, or insufficient by health professionals and the mothers themselves (Bartlett, 2002; Regan & Ball, 2013). The intense promotion of “breast is best” and rigid expert instruction has been attributed to creating anxiety and tension for women who cannot, or choose not, to breastfeed (Avishai, 2011; Sheehan et al., 2010). Although the promotion of exclusive breastfeeding is warranted as a health intervention (Kramer & Kakuma, 2012), the political and biomedical scientific discourse around the maternal body has been suggested to disempower women, because they become disenfranchised from their bodies (Davis-Floyd, 1994).

### **Dilution**

Consistent with previous research, women in this study appeared to distance themselves from their lactating bodies and their breastfeeding through the use of highly descriptive technical discourse, describing the mechanical functioning of their “failing” lactating bodies (Burns et al., 2010). They also used depreciative discourse such as “leaky”, “cracked”, “damaged”, “infected”, “disgusting”, and “exploding” to explore their uncooperative lactating body parts. Alarming, this suggests that women are repelled by their lactating breastfeeding bodies and parts, dissatisfied with the performance or lack thereof, confirming the reproduction of the medicalised

female body (Bar, 2002). I suggest that breastfeeding as an ideological notion retains its status as “best” in the field, but the lactating body (and its parts) are devalued because of continued biomedical and social dissection into more manageable parts (Blum, 2000b; Regan & Ball, 2013). The mothers embodied currency is diluted though the micro-management and the technical physiological discourse surrounding both breastfeeding and infant formula promotion (Barennes et al., 2012; Bartlett, 2002). Essentially cancelling out the mothers’ capital.

Cessation of exclusive breastfeeding occurs within a highly complex social world. The mothers’ concept of self and her body reflects the effect of this complexity and how divergent the values surrounding the maternal body and breastfeeding are (Blum, 2000b; Regan & Ball, 2013). From the findings, these divergent values negatively impact the mothers’ subjective experience of exclusive breastfeeding (Dykes, 2002) and cessation. I argue that cessation of exclusive breastfeeding is an end product of the modern “project breastfeeding” (Avishai, 2011), which has dissected the maternal (pregnant, birthing, and lactating) body into manageable parts (Bartlett, 2002; Dykes, 2005). Mothers in the qualitative study did not focus on their bodies as a complete entity, instead they performed the disembodiment by organising their lactating bodies into separate machine like parts; breasts, nipples, and milk that worked or don’t work. This may be understood as the mothers’ attempt to regain control of her lactating body and of cessation, and to mitigate the stigma of breastfeeding “failure” by deconstructing the body into individual operational forms of capital.

Regan and Ball (2013) describe a similar phenomenon where women’s bodies are objectively viewed as machine-like objects and the breast disembodied from the female form (Regan & Ball, 2013). Our findings concur, suggesting that breastfeeding, as a unified embodied process, has been broken up into masculine biomedical health categories that reflect the influence of the biomedical and consumer fields, where technology associated with the making of infant formula and expressing equipment dominate (Johnson et al., 2009; Regan & Ball, 2013). The dissection of the lactating “leaky” body demonstrates the continued biomedical regulation of the maternal body (Bartlett, 2003), providing some explanation for mothers’ sense of helplessness and lack of autonomy when breastfeeding and stopping (Johnson et al., 2013; Murphy, 2003). The finding that the breast, nipple and milk (the lactating body) are all separate

sites of struggle is a concern, and warrants continued theoretical exploration.

The findings from this study align with previous work suggesting that breast milk is a form of capital, and a consumer product that exists in multiple fields. Women demonstrate both agency and the effect of the subversive power structures, exchanging their many forms of physical capital through expressing and decanting their milk into bottles to mediate the pain of physically breastfeeding, to allofeed, and to facilitate paternal bonding, or to control the shame of breastfeeding in public (Dykes, 2002; Johnson et al., 2009). Women in this current study identified the nipple as the “naughty bit”. As a type of physical capital now divorced from the breast, the nipple has dubious place, as it does not fit into the field of motherhood, the biomedical field, comfortably. The nipples were revered by women as a highly sexualised appendage, closely aligned with the field of consumerism where its value is linked to a type of bodily erotic capital (Rivera Alvarado et al., 2006). Consequently, the role of the nipple in breastfeeding is socially uncertain, leading to some women’s moral discomfort with breastfeeding where they felt compelled to hide the nipple when breastfeeding. Overall, the nipples were viewed by mothers as a highly risky adjunct to the non-sexual lactating breast because of its subversive sexual context (Murphy, 2000). This helps to understand that as type of physical capital, the nipple in the context of breastfeeding has limited exchange potential. The divergent social meanings from competing in the fields may hinder how mothers manage their lactating bodies and breastfeeding practices.

From a Bourdieuan perspective, each form of bodily physical capital (breast, nipple, milk) are used in a transaction process. They are harnessed either individually or collectively—with the addition of other non-maternal allofeeding tools such as bottles and teats—to perform different duties depending on the social situation and context (Bourdieu, 1990b; Shilling, 2003a). Consistent with other research, the findings suggest that expressing and bottle feeding are harnessed by breastfeeding mothers to solve problems, manage feelings of shame when public feeding, or to supplement their lack of breastfeeding and provide an elusive “door to freedom” (Johnson et al., 2013) and less about freedom to return to work (Johns, Amir, McLachlan, & Forster, 2016). This type of transaction, where physical capital is exchanged to negotiate everyday feeding problems that occur around cessation, actually generates forms of

symbolic capital for the mother – good mothering, good maternal body and active membership of the social field through the provisions of breast milk (Johnson et al., 2009; Johnson et al., 2013). This may help mothers balance the demands of breastfeeding and the process of cessation within the field of motherhood, or cause disempowerment (Johnson et al., 2013; Murphy, 1999). However, feeding a child with expressed breast milk was found to increase the risk of cessation by 7% when compared to not expressing and bottle feeding in the first phase of the study. Women's experiences of expressing their milk also revealed an internal moral conflict between gaining symbolic capitals (good mothering status) and self-sacrifice and the need to provide healthy food for the dependent child at any cost (Johnson et al., 2013). Consequently, women describe expressing with some distaste while accepting its necessity because it enables them to continue to do what is right. From the findings, expressing breast milk and bottle-feeding expressed breast milk may not offer women much benefit, and places them at an increased risk of cessation.

The commodification of the lactating breastfeeding body demonstrates the effects of what Bourdieu refers to as symbolic violence. This is not direct overt violence, but is where the larger more powerful social and cultural structures—such as the public health and biological categorisation of breastfeeding, and the heavy marketing of infant formula—frame the way women interpret the functioning of their breastfeeding bodies (McFadden et al., 2016; O'Brien et al., 2016). This applies structural pressure to the mother's active and unpredictable lactating body where subjective autonomy is tenuous (Barret, 2013). The effect of symbolic violence is demonstrated through the mothers' knowing participation in the process of breaking up and mobilising their capital into components (breast, nipple, milk), assuming that the trade and versatility of each separate part would help them manage cessation and common breastfeeding issues such as low milk supply, painful nipples, or feeding in public. In this way, the lactating "risky, leaky" body and its parts can be controlled, the unpredictability can be erased and micromanaged as profitable commodity (Grosz, 1994). I suggest that the dissection of the lactating body and the overt need to control represents a social mistrust of the breastfeeding body (Regan & Ball, 2013), adding to the burden felt by cessation. The finding that women dissected their own lactating bodies into functional parts suggests that the breast, nipple, and milk each hold different social and moral meanings according to the field (Bourdieu, 1990).

**Employment, Age and SIEFA**

Not being on employment leave during the first 6 months was not associated with the interruption of exclusive breastfeeding. In the qualitative study, returning to work—or planning to return to work—was rarely spontaneously mentioned by women as a reason for stopping, and only in the context of needing to be organised (starting their personal milk bank at home) and how emotionally stressful it was because they had to leave the child. It is possible that the variable used to estimate the mother's employment in the AIHW data was not sensitive enough to capture the mother's actual employment status. Indeed previous work has shown a strong correlation with returning to full-time work and reduced breastfeeding (Baxter, Cooklin, & Smith, 2009; Cooklin et al., 2008).

One explanation for the lack of correlation is that the mothers may use other types of available capital (economic, education, partners, breast milk) to mediate the demands of breastfeeding and facilitate continuation. Older and higher educated women who have greater economic, social, and cultural capital have more options, are better supported to return to work or take leave, and express to maintain exclusive breastfeeding, supporting the assumption of this study that older professional women are more likely to continue breastfeeding, and less likely to cease because of the privileges professional employment status affords them (MacGregor & Hughes, 2010; Marmot, 2006).

Our results found a much smaller relationship between socioeconomic status and cessation of exclusive breastfeeding that would be expected on the basis of the widely-acknowledged relationship between socioeconomic disadvantage and lower rates of breastfeeding, including exclusive breastfeeding (Amir & Donath, 2008; Jessri et al., 2013; Kehler et al., 2009). SEIFA was only weakly associated with cessation; women living in the most disadvantaged areas of Australia had only a slightly higher hazard of stopping (8%), when compared to those from least disadvantaged areas (3<sup>rd</sup>–5<sup>th</sup> quintiles). Large disparities between the 4th and 2nd quintiles reported elsewhere (Amir & Donath, 2008) were not found in this study. These findings are interpreted with caution. As a single measure, SEIFA may not show and or explain the complexity or strength of the association between cessation of exclusive breastfeeding and increasing levels of disadvantage. SEIFA measures

socioeconomic characteristics of the mothers' area of residence and is thus only a proxy estimate for the mothers' own level of socioeconomic status. Furthermore, several of the factors identified in our analysis as contributing to higher risk of early cessation (smoking, obesity, low education levels, younger mothers) are strongly associated with child and maternal social-economic disadvantage (Kramer, Seguin, Lydon, & Goulet, 2000; Garcia, et al., 2016). Increasing the individual mothers' reserves of capital—such as education levels and social support networks—will provide more long-term overall impact on maternal and child health and breastfeeding duration. The most public health impact is likely to be achieved when multiple risk factors are modified and or prevented (Bhutta et al., 2008; WHO–UNICEF, 2014). Indeed, early cessation of exclusive breastfeeding appears to be a symptom of an accumulation of factors, many of which are outside the mothers' control (partner preference, SEIFA, method of birth, age, and PND).

The complexity of social disadvantage may be better explained through the concept of capital and exchange potential. For Bourdieu, social status or “class” is a set of biological individuals (mothers) who, being the product of the same shared objective conditions, are endowed with the same habitus (Bourdieu, 1990b, p. 61–63). The weak association can be explained by the shared dispositions of the habitus. All women across the social and age spectrum espoused and demonstrated the harmonising effect of the habitus (Bourdieu & Wacquant, 1992), normalising “breast is best” and internalising the belief that breastfeeding and breast milk is natural and nurturing. This taken-for-granted view was evidenced by the way all women espoused the nutritional, emotional, and personal value of breastfeeding and the flattening out of differences.

Across age ranges, the qualitative study revealed little difference between the mothers' infant feeding tastes. However, younger women as a group have consistently been identified to exclusively breastfeed for a shorter periods compared to older women (Hauck, Fenwick, Dhaliwal, & Butt, 2011; Kehler et al., 2009; Scott, Binns, Graham, & Oddy, 2009). Socially-disadvantaged (young mothers) women have been shown to make more pragmatic choices aligning their health behaviours with their social conditions (Bailey, Pain, & Aarvold, 2004; Graham, 1987). Young women in the qualitative study often spoke about their feeding and need to use formula in a silent or

less reflective manner compared to older, more educated women. In contrast to other studies (Smith, Coley, Labbok, Cupito, & Nwokah, 2012), young mothers in this study valued and found breastfeeding pleasant, and grieved when they could not breastfeed or maintain the closeness it offered with their infants. Their embodied nativity, however, may mean that the young mother disregards her breasts, and sees milk as incompatible and irrelevant in the context of food choices and suitable capital for condition of existence (breastfeeding) (Bourdieu & Wacquant, 1992).

The young mothers' practical approach to cessation and feeding places breast and formula milks in the field as food tastes (Bourdieu, 1984). These tastes classify mothers: "Taste classifies and classifies the classifier" (Bourdieu, 1984, p. xxix). Thus, young mothers distinguish themselves and are distinguished as risky and non-breast feeders by health and consumer groups (Graham & McDermott, 2006). Young women in this study received a persistent message from health experts that they do not breastfeed for long, which acted to reinforce the objective classification. This helps to understand that the "give a go" (Bailey et al., 2004) and pragmatic approach used by the young women was reflective of their class position (Bourdieu, 1984). Cessation of exclusive breastfeeding for younger women, although experienced as stressful and emotional, was predisposed to fulfil the social function of legitimating social differences (Bourdieu, 1984; Browne-Yung, Ziersch, & Baum, 2013). Thus, infant formula use was viewed as a food choice of necessity (Bourdieu, 1990b, p. 73).

Similarities exist between the experiences of using formula, with all women citing the same degree of shame and emotional disconnect. However, unlike their older counterparts, younger women shared a lack of social, cultural, and economic capital (Mossman, Heaman, Dennis, & Morris, 2008). Their age and lack of social and economic capacity, or education attainment as a result of early pregnancy, predisposed a vulnerable mother to "scarcity of know-how" (Bourdieu, 1990a). Limited inherited social and cultural currency is therefore a maker of class and disadvantage (Bourdieu, 1984), predisposing the young mother to cessation (Nelson, 2009). This study's findings reveal that for young mothers, the moral judgment they felt was placed on them and their bodies compounded their inability to access and convert their embodied physical capital (breasts, nipples, milk) (Dykes, Moran, Burt, & Edwards, 2003; Graham & McDermott, 2006). Having the capital is one thing, but



being able to convert the normative preference to breastfeed into reality requires a community of support (Sinha et al., 2015). It is important to promote the normalisation of the maternal body as a form of wealth and capital for the mother. A more personalised, inclusive, approach may have a positive effect on empowering personal feeding choices and extending exclusive breastfeeding for women transitioning into adulthood and motherhood. In addition, strategies that aim to increase social and cultural capital, such as facilitating young mothers to continue with education, will secure longer-term benefits, increase their capital and options for exchange, and improve mother and child health.

Both young and older women's experiences of cessation (the use of formula) in this study were laced with feelings of loneliness, isolation, failure, and being morally judged. These negative experiences were exacerbated by the lack of—and at times absent—partner support, general public judgment, and clear disrespect for the young mothers as a social group (Murphy, 2003; Nelson, 2009). Collectively, these patently have a detrimental impact, creating tension and confusion around the lactating body. Young women, particularly those aged less than 24 years, were also found to be 11% more likely to cease exclusive breastfeeding within the first year compared to older women (> 25 years). For young mothers, the use of infant formula was grounded in the “practical necessity” (Bourdieu, 1990b) of needing to feed their dependent child in their conditions of existence (lower education, economic, and social capital). The lack of capital did not afford the young mother excess resources and, unlike their older and more affluent counterparts, they needed to negotiate breastfeeding problems, adjust to changes in their bodies, and to their child's feeding needs. Happy to agree to breastfeed because it is “natural” initially, young women struggled to embody the class distinction of breastfeeding for any length of time because they did not have the reserve of capital or know-how to support and sustain the practice. What they did have was access to infant formula, that has now become a normalised alternative (McFadden et al., 2016). The use of infant formula represents a pragmatic and simple mercantile exchange (money for food) that is, and was for many in the study, a means to an end—a well-fed baby. The value young mothers placed in making sure the baby was fed irrespective of the type of milk was an interesting finding, as it suggests that within the “young mum” social context, a well-fed and settled baby offers greater distinction in the form of symbolic capital (good mothering) than breastfeeding. This

view may help theorise documented breastfeeding disparities amongst younger women and those living in areas of social disadvantage (MacVicar et al., 2015).

In more developed country settings, considerable evidence supports the association between maternal low education levels, socioeconomic disadvantage, and young maternal age with cessation of exclusive breastfeeding (Victora et al., 2016; WHO, 1981). Paradoxically breastfeeding is more prevalent where poverty is greatest in developing countries (Victora et al., 2016). The greatest public health impact is likely to be achieved when multiple risk factors are modified and or prevented (Bhutta et al., 2008; WHO–UNICEF, 2014). Indeed, early cessation of exclusive breastfeeding appears to be a symptom of the accumulation of factors, many of which are outside the mothers' control (partners' preference, method of birth, SEIFA, age, and PND). The findings confirm this, suggesting that breastfeeding women frame the use of infant formula (cessation of exclusive breastfeeding) as an unexpected necessity, a need to feed the baby due to low milk supply and or to aid infant weight gain.

### **Infant formula: making sense of not breastfeeding**

Women in this study struggled to make sense of infant formula during breastfeeding. This is despite formula milks becoming normalised through intense marketing (McFadden et al., 2016). The women's disquiet may reflect the pervasive presence formula milk holds as a replacement of the mothers' in the field of motherhood. In this study, formula milks had a clear position in the field of motherhood: "normal" compared to breast milk as "natural". Women in the study understood that formula milk had a role as a "necessary evil", accepting its presence as the backup option to what is natural. The rate of formula milk consumption in western countries demonstrates that its place in the field is considerable. In Australia, 43% of infants aged less than 2 months had received formula or a non-human milk in the past 24 hours (AIHW, 2011a). The United Kingdom reported that almost three-quarters of U.K. mothers (73%) had given their baby milk other than breast milk by the age of 6 weeks (Boiling et al., 2010). These rates and the findings suggest global public health recommendations and policies such as the WHO global infant feeding strategies (WHO–UNICEF., 2012) have had little impact on the presence of—and reliance on—infant formula as a substitute for the breast and breast milk (Piwoz & Huffman, 2015). The patterns of cessation and the corresponding use of infant formula milks indicate a

social and cultural acceptance of infant formula as “normal infant food” in the field of motherhood (McFadden et al., 2016; Becker et al., 2011).

However, breastfeeding mothers in this study grappled with how to circumvent the use of formula and then make sense of what they interpreted as doing something socially immoral. Made powerless through their perceived inability to make enough milk, women experienced a moral and personal crisis. Consistent with other research findings, not breastfeeding through the use of formula milk has been found to produce maternal feelings of failure and identify crisis (Lee, 2008). It is, therefore, not simply a normal food choice, but one laced with moral and ethical undertones just as breastfeeding is (Lee, 2007; Murphy, 1999). The finding that women trademarked themselves as a “naughty mother” when they bottle-fed or formula-fed instead of exclusively breastfeeding suggests that women embodied and personalised the distrust of society and health experts around their “leaky, milky” and uncontrollable bodies (Burns, Schmied, Fenwick, & Sheehan, 2012). The didactic expert instructions on the right way to breastfeed, the monitoring and surveillance of feeding practices, and heavy presence of formula milks and bottles may be symbolic of the objective structures’ attempts to modify and control what is essentially uncontrollable (Afflerback et al., 2013; Regan & Ball, 2013).

The conflict created between the unforeseen use of infant formula and the mothers’ deep desire to breastfeed generated intense emotions. This sense of failure, grief, and disjuncture around cessation dominated all narratives, irrespective of how the women were feeding their children at the time or their social position. Women in this study also saw their child’s bodies as healthy or unhealthy according to the milk they received, validating that breastfeeding carries with it a dispositional belief system that is hinged on the understanding that breastfeeding is good/right and formula milk feeding is morally wrong, like “unprotected sex” (Murphy, 2000; J. B. Wolf, 2007). The polarities cause tension, and legitimatise disadvantage and exclusion, exacerbating class/taste-based difference (Bourdieu, 1996; Martin, 1990). New maternal traits are generated in response to the crisis, that change the way mothers view their maternal identity and bodies (Bourdieu, 1990a; Marshall et al., 2007). It is important to note that this is internalised by women (Miller, 2007) and potentially has

a lasting and emotional detrimental effect on those who cease exclusive breastfeeding (Cooke, Sheehan, & Schmied, 2003).

The place infant formula milk has in mothers' lives is important to understand. The mothers' sense of loss at "needing" to use formula milk to replace her own milk because her breasts "didn't work" was palpable and alarming. This generated an emotional burden of guilt. The perceived failure at not being able to meet the nutritional and bonding needs of their child rested heavily on the mother, scratching at her concept of self and motherhood (Lee, 2008). This perhaps reflects the mothers' inability to reconcile the rift between good (breastfeeding) and bad (formula) choices (Blum, 2000a; Virginia & Deborah, 2001). The outcome of this is disembodiment, reproducing the lack of bodily autonomy and self-efficacy found amongst women in this study and in other work associated with cessation of any breastfeeding (Hauck, Hall, & Jones, 2007). It is disturbing that the mothers' self-identity and worth during early mothering is so heavily dependent on the infant feeding method, and how her body does or does not respond. It raises the question of the importance of understanding the effect of interrupting exclusive breastfeeding (adopting formula feeding) has on the mothers' mental health status.

### **Sadness**

Consistent with other research, this study demonstrates that cessation and the use of formula generates intense feelings of sadness (Lee, 2007), and a sense of physical and emotional disconnectedness from the child (Watkins, Meltzer-Brody, Zolnoun, & Stuebe, 2011). This loss is likened to a grief process that women do not make sense of. Irrespective of age and social status, women in this study internalised shame, associating bottle and formula feeding with bad mothering, social disadvantage, and being dirty. Women across the age spectrum went to enormous efforts to hide their breasts with wraps, and their lactating bodies away in cars, rooms, or toilets whilst trying to breastfeed. Some willingly opted to express or bottle feed so they could feed in public. These findings suggest that it is not the act of breastfeeding and feeding the dependent child that is the issue, but that the female maternal body continues to be a contested site of social shame (Johnston-Robledo, Sheffield, Voigt, & Wilcox-Constantine, 2007).

Thus, the function of the lactating breast and feeding from the breasts remains a disputed social practice because of the underlying dualisms generated by the competitive surrounding fields (biomedical, consumer, and motherhood). This dualistic ordering on everyday life and the maternal body negatively influences how women see and use their capital (breasts), and their place in the social field of motherhood, whether they are breast-feeders or bottle-feeders (Petersen & Lupton, 2000, p. 76–80). This may be mediated through the mobilisation of cultural (knowledge and confidence) and social capital (fathers and family, peer support) which would help mothers to feel more empowered.

Women in this study cited mechanical issues such as “excruciating pain”, low milk supply, and difficult attachment as reasons for cessation and why they didn’t have a choice to use formula. Pain in the first two months has been shown to produce depressive symptoms (Watkins et al., 2011). Other evidence suggests a reverse relationship, revealing that those who experience pain or with a pre-existing PND diagnosis are not at an increased risk of cessation because they are more likely to receive and seek out additional support earlier than those without PND (Chaput, Nettel-Aguirre, Musto, Adair, & Tough, 2016). Although women in the study talked of struggling with nipple and breast pain and with low milk supply, it was their feelings of devastation and sadness as a result of cessation that remained. It is therefore difficult to understand the direction of cause and effect: does cessation (formula use) lead to a negative emotional effect (distress, sadness, fatigue), or the pain and breastfeeding difficulties? Cooke, Schmied, and Sheehan (2007) suggested that unintentional cessation may reproduce similar negative affectivity, including symptoms of anxiety and depression (Cooke et al., 2007).

The finding that a diagnosis of perinatal depression (before or immediately after birth) increased the risk of cessation by 15 % after the adjustment of confounding factors (SEIFA, age, education) supports the relationship between PND symptomology (anxiety, fear, sadness) and shorter durations of any and exclusive breastfeeding, increased breastfeeding difficulties, and decreased levels of breastfeeding self-efficacy (Cooper, Murray, & Stein, 1993; Dennis & McQueen, 2009; Dunn, Davies, McCleary, Edwards, & Gaboury, 2006; Thome, Alder, & Ramel, 2006). Mixed feeding (breast and formula) and bottle feeding have been shown to be related to

higher levels of maternal anxiety and depression at 6 months (Ystrom, 2012), with the practice of breastfeeding mediating PND symptoms (Mezzacappa & Katkin, 2002; Ystrom, 2012). PND roughly affects 15–20% of Australian women (AIHW 2012a), and whilst research to date has focused on the detrimental effects of PND on both maternal and child wellbeing and breastfeeding outcomes (Cooper et al., 1993; Dennis & Hodnett, 2007; Dennis & McQueen, 2009; Mykletun et al., 2007; Tissot et al., 2016), the possible emotional dysphoria generated from cessation has received less attention.

From the FG narratives, the use of formula milk during breastfeeding reproduced varying degrees and ongoing feelings sadness, guilt, fear, and anxiety. I suggest that the maternal emotional and moral dysphoria experienced by women in this study resembles unresolved grief associated with loss (Shakespeare et al., 2004; Uvnäs-Moberg, Widström, Nissen, & Björvell, 1990). Further the direction of the relationship between PND, anxiety, and grief are under-explored, making it unclear from the literature whether the grief experienced through cessation is a symptom of PND, exacerbated by underlying PND and anxiety disorders, or a separate psychological condition generated by an intense emotional crisis of an embodied dissonance (Kendler, Kuhn, & Prescott, 2004). When pre-existing PND and anxiety has been taken into account, the negative effect of infant bottle or mixed-feeding on post-partum anxiety is reduced but remains significant, signifying a link between cessation of breastfeeding, PND, and feeding method (Cooke et al., 2007; Ystrom, 2012). Thus, although a pre-existing condition of PND or anxiety could not be assessed from the FG participants, the narratives suggest that cessation through the use of formula produces a very real negative emotional and physical response that is possibly not, or only loosely, connected with PND.

The mothers' response to cessation appears to be characterised by protracted subjective feelings of failure, fear, guilt, and moral compromise. This is an interesting finding: It highlights the experience of cessation of exclusive breastfeeding (use of infant formula during breastfeeding) as a potential mental health issue for breastfeeding women. In light of the prevalence of infant formula use amongst Australian women, and its increasing dominance as a replacement milk, there is a

need to investigate the relationship between formula use during breastfeeding and maternal emotional physiological health more closely.

## 7. CONCLUSIONS

This study documents the prevalence of cessation of exclusive breastfeeding within the first 6 months of an infants' life, and explore mothers' experiences and how they made sense of cessation. Both the quantitative and qualitative studies highlight the lack of sustained exclusive breastfeeding. Overall, the analysis from the national sample revealed that few women in Australia exclusively breastfeed, with half using infant formula or other fluids/food within the first two months. In regards to the mothers' experiences, the first important conclusion is that this study attests to the complex nature of breastfeeding as a deeply embodied and social process, and the failure of the biomedical field and public health policies to recognise this (Barclay et al., 2012; Bartlett, 2003; Blum, 2000a; Dykes, 2005). The women's stories were complex, contextual, and difficult to unravel. Cessation of exclusive breastfeeding thus occurs and is experienced within a highly complex social world. The mothers' concept of self and their bodies reflects the effect of this complexity and how divergent the values surrounding the maternal body and breastfeeding are. This supports the importance of health practitioners, policy, and future research viewing the process of breastfeeding as more than a feeding choice and a measurable public health outcome. How and why mothers feed their infants and young children is a deeply subjective experience, affected by time and place and, thus, in a constant state of flux. This requires breastfeeding to be reconceptualised as a collective family practice, not a health choice.

Women in the study chiefly set out to breastfeed, a term interpreted by them as "feeding from the breast". The mothers' preference to breastfeed reflects the mutual agreement between habitus, field, and doxa; the taken-for-granted assumption that "breast is always best", which dominates and underpins the values in the field of motherhood. This importantly directs the mothers' beliefs and values around infant feeding, but does not determine exclusivity or the use of formula.

The lack of awareness of the biomedical term *exclusive breastfeeding* in the mother's day-to-day infant feeding practices suggests a disjuncture. Essentially, the biomedical field and the mothers' subjective preferences (habitus) are out of sync. The high



prevalence of the preference to breastfeed across the age and social spectrum legitimises and supports that ruling doxa of “breast is best”, giving natural order through shared beliefs that to breastfeed is natural and best for the baby. This study concludes that there is no clear distinction in identifying personal factors between mothers in regards to preferring to breastfeed or infant formula feed: Women are united by the belief that breastfeeding (understood as feeding from the breast) is best, natural, and the socially expected norm. Mothers used this as a social cultural “taste” and form of symbolic power. The exchange offers the mother status in the field of motherhood as a breast feeder/good mother. Conversely, cessation and formula feeding generates negative capital, decreasing the mothers’ social status.

In regards to factors associated with cessation, and experiences of cessation, women internalise and undertake their preference to breastfeed seriously and with committed intent across the social and age spectrum. However, the complex nature of breastfeeding compounds the experiences so that multiple factors are associated with cessation. Many of these factors, identified in this study, are outside the mothers’ direct control, such as maternal age, birth method, SIEFA, and PND. Considering that women employ two contemporary forms of allofeeding it is important for health practitioners and policymakers to recognise that allofeeding has a role in future strategies to support the breastfeeding mother. Partners are the most important resource available to support mothers to fulfil their preference and negotiate the demands of breastfeeding. As a type of allofeeding, they are currently underutilised and marginalised. This is a particularly exciting finding as it opens up new cost-effective avenues to harness a partner’s own personal, social, and cultural capital, to use this to support and empower the mother to continue to breastfeed and avoid formula milks.

Bourdieu’s theoretical framework helps to reveal the logic of mothers’ practices. Breastfeeding, cessation, and concepts of motherhood are traits of the maternal habitus (Warin et al., 2008). As deeply embodied traits, they prompt the mothers’ preferences but do not cause cessation. Practices are reproduced through a complex interplay between field, capital, and habitus. Overall, the practice of formula feeding in the field of motherhood, and in the face of preferring to breastfeed, generates a hysteresis, a crisis between the maternal habitus, capital, and field. As a type of

consumer capital, it tears at the mothers' embodied identity, generating negative capital and offering little profitable return for the mother. Although understood as "necessary evil", the use of formula milk for breastfeeding mothers appears to have a polarising effect. Women label themselves, and are in turn objectified, through their feeding practices: good or bad, healthy or unhealthy, morally right or wrong. The anxiety, shame, and fear perhaps generated from this may not reflect the nutritional validity of the milks, but society's (biomedical and general public) uneasiness and mistrust of the "leaky, lactating" female body (Bartlett, 2002).

Bourdieu's concept of capital helps to view the lactating/breastfeeding body as a form of physical capital that offers a profitable return for both the mother, baby, and also for society at large. Feeding from the breast generates numerous types of capital for both mother and baby, including symbolic capital—where the body is put to use to double the social return—and "good mother" and health for the baby. However, this study concludes that this process is impeded by a biomedical and subjective dissection of the mothers' physical capital. The lactating body is not used as a complete entity to breastfeed, and the breast, nipples, and milk are mobilised by numerous players—including the mother – as independent forms of capital. As physical capital, the breast, nipple, and milk are dissected from the maternal body, given divergent meanings, and micromanaged as individual parts. The power of the complete lactating/breastfeeding body is halted by the dualistic ownership and corporatisation of the maternal body, which indirectly impacts on the duration of exclusive breastfeeding (Bartlett, 2003; Blum, 1993). This approach reduces the profitable exchange, disempowers the mothers' agency, and thus potentially effects breastfeeding success.

Cessation produces redundant physical capital. The lack of exchange of the mothers' physical capital generates hysteresis, a crisis for the mother. This is a disjuncture between the habitus, capital, and practice. New habitual dispositions of grief, shame, and sadness are generated that the breastfeeding mother cannot make sense of. Overall, the finding that women grieved the loss of feeding from the breast after interrupting exclusive breastfeeding was profound. This suggests that irrespective of the milk in the bottle (human or formula), the symbolic bond that is created between the mother and child through breastfeeding is deeply embodied as a disposition and form of symbolic capital. Once lost through cessation, women struggle to emotionally

recover. Although saddened by not being able to provide for and protect their children, the perceived fractured physical bond through cessation was felt intensely. Women in this study grieved for the closeness that feeding from the breast was felt to have facilitated. They longed for the bond and connection that they felt they could not replace with bottles of breast milk or infant formula, or by others feeding their child. Many women did not recover from this, and held onto their grief.

Mothers carry a burden of unresolved grief that reflects a form of maternal dysphoria (American Psychiatric Association, 2000; Chaput et al., 2016). The feelings of loss suggest that interrupting exclusive breastfeeding through the use of bottles and formula breaks or weakens the bond, and mothers then struggle to regain a sense of self identify, composure, and emotional stability. The lack of exchange of physical capital and the mechanical dissection of the maternal body into independent manageable elements of capital (breasts, nipples, and milk) may contribute to ongoing personal grief and tension as a result of not breastfeeding.

The presence of, and the longevity of breastfeeding grief is a concern, and requires further investigation. There is also a need to re-evaluate policy and clinical practice in the way exclusive breastfeeding is promoted and translated to women and their families. The finding that women did not understand the biomedical public health category, *exclusive breastfeeding*, as a way to feed their infants and young children attests to the disjuncture between field, practice and cultural capital. Framing and promoting breastfeeding as a family practice, and importantly engaging partners to understand the value of exclusive breastfeeding, is essential in the struggle to support mothers. Finally, mobilising partners as allofeeders has the potential to improve the family's social and cultural capital, support breastfeeding mothers, reduce the prevalence of cessation of exclusive breastfeeding and mitigate the effects of breastfeeding grief.

## **Strengths, limitations and future directions**

### **Strengths, limitations and future directions**

Limitations in this research include the potential for non-sampling and recall error bias due to the self-reported survey and FG data, and the potential of imprecise estimates due to imputed missing covariate data. The major strengths of the quantitative study are the reliability of the AIHW data, the adherence to reference standard validated measurements and the generalisability of the results given the large sample size and the precision of the exclusive breastfeeding measurement (WHO–UNICEF, 2008). The reliability of the data collection, definitions used to define the infant feeding terms, and longitudinal design of the AIHW data base allows for future repeated analysis as the Infant Feeding Survey is an ongoing national report. In this way patterns of cessation may be established.

A limitation is that both data sets relied on the mothers' or carers' memories and interpretation of the survey questions and their experiences and selection bias. The qualitative data provides a non-representable sample of Tasmanian women, however the transferability of the results, and trustworthiness of the demographic and infant feeding data is improved through the adherence to validated NHMRC, AIHW and WHO recommended terms and categories. I have also been explicit about how and why the participants were recruited including detailed inclusion and exclusive criteria, to ensure transparency and robustness of the enquiry. Equally using Bourdieu's theory offers triangulation, increasing the completeness, interpretation and credibility of the analysis (Bourdieu, & Wacquant, 1994; Pope, 1995).

A strength of this data is that it includes a subsample (50%) of women aged below 24 years of age, and who were living in some of the most socioeconomic disadvantaged areas in Tasmania at the time. This data would lend itself to further analysis, a possible comparative analysis with the older and more socioeconomically advantaged women and follow up interviews in the future.

As with other breastfeeding research, a frustrating limitation is the ongoing methodological problem defining exclusive breastfeeding and other terms used to describe infant feeding practices and breastfeeding (Binns, 2009). I have struggled over the years and have attempted to be as consistent as possible, however I list this as a limitation to this work to bring this to the attention of others.

### **Strengths, limitations and future directions**

Exclusive breastfeeding is a modern infant feeding category. It has been poorly categorised, measured in the past and used inconsistently throughout the literature and research thus it is difficult to track its path as a feeding practice over time. As a standalone term exclusive breastfeeding subsequently has morphed into the general term of breastfeeding. Although recent national infant feeding surveys such as the one I have used for this research have helped to clarify the boundaries for defining breastfeeding and infant feeding practices in general, terms are still used interchangeably throughout the literature. For example, the terms ‘any breastfeeding’, ‘breastfeeding’ and ‘bottle’ feeding are all used to describe breastfeeding. At times it may seem that I am deterring from my focus by refereeing to any and or breastfeeding instead of the term used in the title of the thesis. It may also limit the interpretation of the data presented. However, I had little choice in some instances due to the complex nature of breastfeeding and variations within the literature available.

As much as this is a limitation I feel it is also actually important as it reflects the social nature of what it is to breastfeed for women. These are as I have suggested medical and scientific terms that are for the most part foreign to women. The ambiguity of breastfeeding and how it is recorded and practiced should show policy and health professionals that care needs to be taken in order to respect the mothers understanding of how she uses her bodies resources. Her breasts and milk are not easily scientifically or socially categorised, and thus this area of science and health could benefit from reconceptualization.

It is imperative in future research that every effort is made to follow the WHO definitions if we are going to establish credible patterns of infant practices globally. The problem lies in recording the practice and how it is interpreted and translated to the mothers/families and health professionals. As I have shown mothers do not appear to understand exclusivity and chiefly ‘breastfeed’. Which may be exclusive, or may not be but to the mother she is just breastfeeding. moving forward, it is actually the use of infant formula that requires more research to understand the impact of its place as a commodity and form of capital in cultural and social the landscape of motherhood and parenting in general.

**Strengths, limitations and future directions**

The qualitative data was complex. The broad nature of the data means that the findings are not representative of all mothers' experiences. However, this also offers the ability to see the unseen, and theoretically explore what is often overlooked in empirical data (Bourdieu & Wacquant, 1992). It holds potential for application to breastfeeding and infant feeding areas of research, education and policy.

A limitation of the qualitative study is that women were not asked about how they viewed their breastfeeding bodies size, shape, or form. A future study exploring obese or overweight women's subjective experiences about their bodies during breastfeeding would add important information to the context of obesity, women's health, and the identified relationship with breastfeeding success or failure.

In an area of research where survey and biological physiological research dominates, this study offers a new approach and greater insight into understanding what women experience as "to breastfeed" "exclusive breastfeeding" and cessation of breastfeeding.

Women are historically the focus of breastfeeding research, and support strategies and health professionals/experts are key supports and providers of cultural capital. However, this study shows that there is a need for future research to apply more emphasis on partners and the roles and place they have in breastfeeding. Partners are in a key position as potential allofeeders to be considered the first line of support for the mother. Education, clinical practice, and policy would benefit from exploring the partners' subjective perspectives and how they would like to be part of the breastfeeding dyad.

The concept of allofeeding (partners and family) is a useful and potentially cost-effective way to approach how best to support mothers to fulfil their desires to breastfeed.

A strength of this research is the sample sizes of both studies. The quantitative study is a representative sample and has important implications. The qualitative study was the first in Tasmania to explore a wide range of mothers' experiences from a broad demographic of women.

**Strengths, limitations and future directions**

Public health interventions and educational strategies targeting multiple factors rather than socioeconomic factors have the greatest potential in reducing cessation of exclusive breastfeeding.

## REFERENCES

- Afflerback, S., Carter, S. K., Anthony, A. K., & Grauerholz, L. (2013). Infant-feeding consumerism in the age of intensive mothering and risk society. *Journal of Consumer Culture*, 13(3), 387–405. doi:10.1177/1469540513485271
- Al-Sahab, B., Lanes, A., Feldman, M., & Tamim, H. (2010). Prevalence and predictors of 6-month exclusive breastfeeding among Canadian women: a national survey. *BMC Pediatrics*, 10, 20.
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders*. Washington, DC: Author.
- Amir, L. H., & Donath, S. M. (2008). Socioeconomic status and rates of breastfeeding in Australia: evidence from three recent national health surveys. *Medical Journal of Australia*, 189(5), 254–256.
- Anonymous (Medical Annotations). (1858). The murder of the innocents. *Lancet* (3 April ), 345–346.
- Arthur, P. G., Kent, J. C., & Hartmann, P. E. (1991). Metabolites of lactose synthesis in milk from women during established lactation. *Journal of Pediatric Gastroenterology and Nutrition*, 13(3), 260–266.
- Atkinson, W. (2014). A sketch of ‘family’ as a field: From realized category to space of struggle. *Acta Sociologica*, 57(3), 223–235.  
doi:10.1177/0001699313511470
- Australian Bureau of Statistics. (2012). *Australian Health Survey: First Results, 2011–12* (cat. no. 4364.0.55.001). Retrieved from <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/4364.0.55.0012011-12?OpenDocument>
- Australian College of Midwives. (1998). *ACMI competency standards for midwives*. Melbourne: Author. Retrieved from <http://nla.gov.au/nla.cat-vn2037321>.
- Australian Health Ministers’ Conference. (2009). *Australian National Breastfeeding Strategy 2010-2015*. Canberra: Australian Government Department of Health and Ageing. Retrieved from [http://www.health.gov.au/internet/main/publishing.nsf/Content/49F80E887F1E2257CA2576A10077F73F/\\$File/Breastfeeding\\_strat1015.pdf](http://www.health.gov.au/internet/main/publishing.nsf/Content/49F80E887F1E2257CA2576A10077F73F/$File/Breastfeeding_strat1015.pdf).



## References

- Australian Institute of Family Studies (AIFS). (2008). Growing up in Australia: the longitudinal study of Australian children. *Annual Report*. Retrieved from <http://www.aifs.gov.au/growingup/pubs/ar/ar200607/breastfeeding.html>
- Australian Institute of Health and Welfare. (2011a). *2010 Australian National Infant Feeding Survey: indicator results*. Retrieved from <http://www.aihw.gov.au/WorkArea/DownloadAsset.aspx?id=10737420925>
- Australian Institute of Health and Welfare (2011b). *Headline indicators for children's health, development and wellbeing 2011*. ( Cat. no. PHE 144). Canberra: AIHW Retrieved from <http://www.aihw.gov.au/WorkArea/DownloadAsset.aspx?id=10737419586>.
- Australian Institute of Health and Welfare. (2012a). *Experience of perinatal depression: data from the 2010 Australian National Infant Feeding Survey*. Retrieved from: <http://www.aihw.gov.au/WorkArea/DownloadAsset.aspx?id=10737422202>
- Australian Institute of Health and Welfare. (2012b). Overweight and obesity. *2011–12 Australian Bureau of Statistics Australian Health Survey*. Retrieved from <http://www.aihw.gov.au/overweight-and-obesity/>
- Avishai, O. (2011). Managing the lactating body: the breastfeeding project in the age of anxiety. In P. Liamputtong (Ed.), *Infant feeding practices: A cross-cultural perspective* (pp. 23–36). New York: Springer Science & Business Media.
- Ayton, J., Hansen, E., Quinn, S., & Nelson, M. (2012). Factors associated with initiation and exclusive breastfeeding at hospital discharge: late preterm compared to 37 week gestation mother and infant cohort. *International Breastfeeding Journal*, 7(1), 16.
- Ayton, J., Howes, F., Hansen, E., & Nelson, M. (2014). Evaluating the prevention of premature cessation of exclusive breastfeeding in the general practice setting during the scheduled child immunisation consultation: a pilot study. *Aust Journal of Primary Health*.
- Baby Friendly Health Initiative Australia. (2007a). *The global criteria for baby friendly hospitals in Australia* (1). Retrieved from: <https://www.midwives.org.au/baby-friendly-health-initiative-bfhi>
- Baby Friendly Health Initiative Australia. (2007b). *The global criteria for baby friendly hospitals in Australia* Vol. 1-4. *The criteria for assessing*

## References

- implementing the Ten Steps to Successful Breastfeeding*. Retrieved from <https://www.midwives.org.au/baby-friendly-heath-initiative-bfhi>
- Backhed, F., Roswall, J., Peng, Y., Feng, Q., Jia, H., Kovatcheva-Datchary, P., . . . Jun, W. (2015). Dynamics and stabilization of the human gut microbiome during the first year of life. *Cell Host and Microbe*, 17(5), 690–703.
- Baghurst, P., Pincombe, J., Peat, B., Henderson, A., Reddin, E., & Antoniou, G. (2007). Breast feeding self-efficacy and other determinants of the duration of breast feeding in a cohort of first-time mothers in Adelaide, Australia. *Midwifery*, 23(4), 382-391.
- Bailey, C., Pain, R. H., & Aarvold, J. E. (2004). A ‘give it a go’ breast-feeding culture and early cessation among low-income mothers. *Midwifery*, 20(3), 240–250.
- Baker, M., & Milligan, K. (2008). Maternal employment, breastfeeding, and health: evidence from maternity leave mandates. *Journal of Health Economics*, 27(4), 871–887.
- Ballantyne, J. W. (1908). *The byrthe of mankynde; its authors, editions and contents*. London, UK.: Sherrat and Hughes.
- Baker, J. L., Michaelsen, K. F., Rasmussen, K. M., & Sørensen, T. I. (2004). Maternal prepregnant body mass index, duration of breastfeeding, and timing of complementary food introduction are associated with infant weight gain. *The American Journal of Clinical Nutrition*, 80(6), 1579-1588.
- Barclay, L., Longman, J., Schmied, V., Sheehan, A., Rolfe, M., Burns, E., & Fenwick, J. (2012). The professionalising of breast feeding – where are we a decade on? *Midwifery*, 28(3), 281–290.
- Barennes, H., Empis, G., Quang, T. D., Sengkhamyong, K., Phasavath, P., Harimanana, A., Koffi, P. N. (2012). Breast-milk substitutes: a new old-threat for breastfeeding policy in developing countries. A case study in a traditionally high breastfeeding country. *PLoS One*, 7(2), e30634.
- Barker, D. J. (2007). The origins of the developmental origins theory. *Journal of Internal Medicine*, 261(5), 412–417.
- Barros, F. C., Victora, C. G., Morris, S. S., Halpern, R., Horta, B. L., & Tomasi, E. (1997). Breast feeding, pacifier use and infant development at 12 months of age: a birth cohort study in Brazil. *Paediatric and Perinatal Epidemiology*, 11(4), 441–450.
- Bartlett, A. (2002). *Breastfeeding as headwork: Corporeal feminism and meanings*

## References

- for breastfeeding*. Paper presented at the Women's Studies International Forum. Vol. 25, No. 3, 2002, p. 373-382.
- Bartlett, A. (2003). Breastfeeding bodies and choice in late capitalism. *Hecate*, 29(2), 153.
- Barton, S. J. (2001). Infant feeding practices of low-income rural mothers. *American Journal of Maternal/Child Nursing*, 26(2), 93–97.
- Baxter, J., Cooklin, A. R., & Smith, J. (2009). Which mothers wean their babies prematurely from full breastfeeding? An Australian cohort study. *Acta Paediatrica*, 98(8), 1274–1277.
- Bazeley, P., & Jackson, K. (2013). *Qualitative data analysis with NVivo*. London. Great Britain: Sage Publications Limited.
- Becker, G. E., Remington, S., & Remington, T. (2011). Early additional food and fluids for healthy breastfed full-term infants. *Cochrane Database of Systematic Reviews*, 12.
- Bertini, G., Perugi, S., Dani, C., Pezzati, M., Tronchin, M., & Rubaltelli, F. F. (2003). Maternal education and the incidence and duration of breast feeding: a prospective study. *Journal of Pediatric Gastroenterology and Nutrition*, 37(4), 447–452.
- Bhutta, Z. A. (2013). Early nutrition and adult outcomes: pieces of the puzzle. *Lancet*, 382(9891), 486–487.
- Bhutta, Z. A., Ahmed, T., Black, R., E, Cousens, S., Dewey, K., Giugliani, E., . . . Shekar, M. (2008). What works? Interventions for maternal and child undernutrition and survival. *Lancet*, 371(9610), 417–440.
- Bhutta, Z. A., & Salam, R. A. (2012). Global nutrition epidemiology and trends. *Annals of Nutrition and Metabolism*, 61 Suppl 1, 19–27.
- Binns, C., & Lee, M. K. (2014). Exclusive breastfeeding for six months: The WHO six months recommendation in the Asia Pacific Region. *Asia Pacific Journal of Clinical Nutrition*, 23(3 Sep 2014), 344–350.
- Binns, C. W., & Scott, J. A. (2002). Using pacifiers: what are breastfeeding mothers doing? *Breastfeeding Review Journal*, 10(2), 21–25.
- Binns, C. W., Fraser, M. L., Lee, A. H., & Scott, J. (2009). Defining exclusive breastfeeding in Australia. *J Pediatric Child Health*, 45(4), 174-180.
- Blaffer Hrdy, S. (2009). *Mothers and others: The evolutionary origins of mutual understanding* London: Belknap Press of Harvard University Press.

## References

- Blaffer Hrdy, S. (2009). Why it takes a village. In *Mothers and others: The evolutionary origins of mutual understanding* (pp. 66–109). London: Belknap Press of Harvard University Press.
- Blaikie, N. (2000). *Designing Social Research*. Cambridge: Polity Press.
- Blum, L. (1993). Mothers, babies, and breastfeeding in late capitalist America: The shifting contexts of feminist theory. *Feminist Studies*, 19(2), 291–291.
- Blum, L. (2000a). *At the breast: Ideologies of breastfeeding and motherhood in the contemporary United States*. Boston: Beacon Press.
- Blum, L. (2000b). From sacred to disembodied motherhood. In *At the breast: Ideologies of breastfeeding and motherhood in the contemporary United States* (pp. 19–62). Boston: Beacon Press.
- Blum, L. (2000c). Twenty-first century virtual mothers or rounded mothers? In *At the breast: Ideologies of breastfeeding and motherhood in the contemporary United States* (pp. 180–201). Boston: Beacon Press.
- Boiling, K., Grant, G., Hamlyn, B., & Thornton, A. (2005). *Infant Feeding Survey 2005*. Retrieved from London: <http://www.ic.nhs.uk/> [Free Full-text]
- Boiling, K., Grant, G., Hamlyn, B., & Thornton, A. (2010). *Infant Feeding Survey 2010*. Retrieved from London: <http://www.hscic.gov.uk/article/2021/Website-Search?productid=9569&q=breastfeeding&sort=Relevance&size=10&page=2&area=both-top>
- Bourdieu, P. (1977). *Outline of a theory of practice*. Cambridge: Cambridge University Press.
- Bourdieu, P. (1984). *Distinction*. London: Routledge and Kegan Paul.
- Bourdieu, P. (1990a). *In other words: essays toward a reflexive sociology* (M. Adamson, Trans.). California: Stanford University Press.
- Bourdieu, P. (1990b). *The logic of practice* (R. Nice, Trans.). Cambridge: Polity.
- Bourdieu, P. (1996). On the family as a realized category. *Theory, culture & society*, 13(3), 19–26.
- Bourdieu, P. (2000). *Pascalian meditations*. Palo Alto: Stanford University Press.
- Bourdieu, P., & Wacquant, L. (1992). *An invitation to reflexive sociology*. Cambridge, U.K.: Polity Press Blackwell Publishers.
- Brown, A. E., Raynor, P., Benton, D., & Lee, M. D. (2009). Indices of multiple deprivation predict breastfeeding duration in England and Wales. *The European Journal of Public Health*, 20(2), 231–235. ckp114.

## References

- Browne-Yung, K., Ziersch, A., & Baum, F. (2013). 'Faking til you make it': social capital accumulation of individuals on low incomes living in contrasting socio-economic neighbourhoods and its implications for health and wellbeing. *Social Science and Medicine*, 85, 9–17.
- Bryder, L. (2009). From breast to bottle: a history of modern infant feeding. *Endeavour*, 33(2), 54–59.
- Bryman, A. (2006). Integrating quantitative and qualitative research: how is it done? *Qualitative Research*, 6(1), 97–113.
- Bryman, A. (2007). Barriers to integrating quantitative and qualitative research. *Journal of Mixed Methods Research*, 1(1), 8–22.
- Bunton, R., & Petersen, A. (2002). *Foucault, health and medicine*. London: Routledge.
- Buonfiglio, D. C., Ramos-Lobo, A. M., Freitas, V. M., Zampieri, T. T., Nagaishi, V. S., Magalhaes, M., Donato, J., Jr. (2016). Obesity impairs lactation performance in mice by inducing prolactin resistance. *Scientific Reports*, 6, 22421.
- Burns, E., Schmied, V., Fenwick, J., & Sheehan, A. (2012). Liquid gold from the milk bar: Constructions of breastmilk and breastfeeding women in the language and practices of midwives. *Social Science and Medicine*.
- Burns, E., Schmied, V., Sheehan, A., & Fenwick, J. (2010). A meta-ethnographic synthesis of women's experience of breastfeeding. *Maternal and Child Nutrition*, 6(3), 201–219.
- Butler, S., Williams, M., Tukuitonga, C., & Paterson, J. (2004). Factors associated with not breastfeeding exclusively among mothers of a cohort of Pacific infants in New Zealand. *The New Zealand Medical Journal (Online)*, 117(1195), n/a.
- Cai, X., Wardlaw, T., & Brown, D. W. (2012). Global trends in exclusive breastfeeding. *International Breastfeeding Journal*, 7(1), 12.
- Cairns, K., Johnston, J., & MacKendrick, N. (2013). Feeding the 'organic child': Mothering through ethical consumption. *Journal of Consumer Culture*, 13(2), 97–118.
- Calnen, G. (2007). Paid maternity leave and its impact on breastfeeding in the United States: an historic, economic, political, and social perspective. *Breastfeeding*

## References

- Medicine: the official journal of the Academy of Breastfeeding Medicine*, 2(1), 34–44.
- Carbajal, R., Chauvet, X., Couderc, S., & Olivier-Martin, M. (1999). Randomised trial of analgesic effects of sucrose, glucose, and pacifiers in term neonates. *The BMJ*, 319(7222), 1393–1397.
- Carter, P. (1995). *Feminism, breasts and breast-feeding*. Houndmills: Macmillan.
- Cattaneo, A., Yngve, A., Koletzko, B., & Guzman, L. R. (2005). Protection, promotion and support of breast-feeding in Europe: current situation. *Public Health Nutrition*, 8(1), 39–46.
- Chaput, K. H., Nettel-Aguirre, A., Musto, R., Adair, C. E., & Tough, S. C. (2016). Breastfeeding difficulties and supports and risk of postpartum depression in a cohort of women who have given birth in Calgary: a prospective cohort study. *Canadian Medical Association Journal Open*, 4(1), E103–E109.
- Clark, A., Skouteris, H., Wertheim, E. H., Paxton, S. J., & Milgrom, J. (2009). My baby body: A qualitative insight into women's body-related experiences and mood during pregnancy and the postpartum. *Journal of Reproductive and Infant Psychology*, 27(4), 330–345.
- Clendening, L. (1942). *Source book of medical history*. Canada: Dover General Publishing.
- Collyer, F. M., Willis, K. F., Franklin, M., Harley, K., & Short, S. D. (2015). Healthcare choice: Bourdieu's capital, habitus and field. *Current Sociology*.
- Commonwealth of Australia. (2007). *The Best Start: Report on the inquiry into the health benefits of breastfeeding*. Retrieved from:  
[http://www.aph.gov.au/parliamentary\\_Business/Committees/House\\_of\\_Representatives\\_Committees?url=haa/breastfeeding/report.htm](http://www.aph.gov.au/parliamentary_Business/Committees/House_of_Representatives_Committees?url=haa/breastfeeding/report.htm)
- Cooke, M., Schmied, V., & Sheehan, A. (2007). An exploration of the relationship between postnatal distress and maternal role attainment, breast feeding problems and breast feeding cessation in Australia. *Midwifery*, 23(1), 66–76.
- Cooke, M., Sheehan, A., & Schmied, V. (2003). A description of the relationship between breastfeeding experiences, breastfeeding satisfaction, and weaning in the first 3 months after birth. *Journal of Human Lactation, official journal of International Lactation Consultant Association*, 19(2), 145–156.

## References

- Cooklin, A. R., Donath, S. M., & Amir, L. H. (2008). Maternal employment and breastfeeding: results from the longitudinal study of Australian children. *Acta Paediatrica*, 97(5), 620–623.
- Cooper, P. J., Murray, L., & Stein, A. (1993). Psychosocial factors associated with the early termination of breast-feeding. *Journal of Psychosomatic Research*, 37(2), 171–176.
- Costa, R. (2006). The logic of practices in Pierre Bourdieu. *Current Sociology*, 54(6), 873–895.
- Couzens Hoy, D. (Ed.) (1986). *Foucault: a critical reader*. Oxford, UK: Blackwell.
- Cregan, M. D., De Mello, T. R., Kershaw, D., McDougall, K., & Hartmann, P. E. (2002). Initiation of lactation in women after preterm delivery. *Acta Obstetrica et Gynecologica Scandinavica*, 81(9), 870–877.
- Cregan, M. D., Mitoulas, L. R., & Hartmann, P. E. (2002). Milk prolactin, feed volume and duration between feeds in women breastfeeding their full-term infants over a 24 h period. *Experimental Physiology*, 87(2), 207–214.
- Creswell, J. W., Fetters, M. D., & Ivankova, N. V. (2004). Designing a mixed methods study in primary care. *Annals of Family Medicine*, 2(1), 7–12.
- da Costa, S. P., van der Schans, C. P., Boelema, S. R., van der Meij, E., Boerman, M. A., & Bos, A. F. (2010). Sucking patterns in fullterm infants between birth and 10 weeks of age. *Infant Behavior and Development*, 33(1), 61–67.
- Davis-Floyd, R. E. (1994). The technocratic body: American childbirth as cultural expression. *Social science & medicine*, 38(8), 1125–1140.
- Dennis, C. L., & Hodnett, E. (2007). Psychosocial and psychological interventions for treating postpartum depression. *Cochrane Database of Systematic Reviews*, (4), CD006116.
- Dennis, C. L., & McQueen, K. (2009). The relationship between infant-feeding outcomes and postpartum depression: a qualitative systematic review. *Pediatrics*, 123(4), e736–751.
- Denzin, N., & Lincoln, Y. (2008). *Collecting and interpreting qualitative materials* (3rd ed.). California: SAGE.
- Dettwyler, K., A. . (2004). When to wean: biological versus cultural perspectives. *Clinical Obstetrics and Gynecology*, 47(3), 712–723.

## References

- Donath, S., & Amir, L. (2000). Rates of breastfeeding in Australia by state and socio-economic status: evidence from the 1995 National Health Survey. *Journal of Paediatrics and Child Health*, 36(2), 164–168.
- Donath, S. M., & Amir, L. H. (2004). The relationship between maternal smoking and breastfeeding duration after adjustment for maternal infant feeding intention. *Acta Paediatrica*, 93(11), 1514–1518.
- Donath, S. M., & Amir, L. H. (2008). Maternal obesity and initiation and duration of breastfeeding: data from the longitudinal study of Australian children. *Maternal and Child Nutrition*, 4(3), 163–170.
- Donnan, P. T., Dalzell, J., Symon, A., Rauchhaus, P., Monteith-Hodge, E., Kellett, G., Whitford, H. M. (2013). Prediction of initiation and cessation of breastfeeding from late pregnancy to 16 weeks: the Feeding Your Baby (FYB) cohort study. *BMJ Open*, 3(8).
- Douglas, M. (2003). *Purity and danger: An analysis of concepts of pollution and taboo*. London, Routledge.
- Dunn, S., Davies, B., McCleary, L., Edwards, N., & Gaboury, I. (2006). The relationship between vulnerability factors and breastfeeding outcome. *Journal of Obstetric, Gynecologic, and Neonatal Nursing*, 35(1), 87–97. doi:10.1111/j.1552-6909.2006.00005.x
- Dykes, F. (2002). Western marketing and medicine-construction of an insufficient milk syndrome. *Health Care for Women International*, 23(5), 492–502.
- Dykes, F. (2005). ‘Supply’ and ‘demand’: breastfeeding as labour. *Social Science and Medicine*, 60(10), 2283–2293.
- Dykes, F., Moran, V. H., Burt, S., & Edwards, J. (2003). Adolescent mothers and breastfeeding: experiences and support needs – an exploratory study. *Journal of Human Lactation*, 19(4), 391–401.
- Earle, S. (2002). Factors affecting the initiation of breastfeeding: implications for breastfeeding promotion. *Health Promotion International*, 17(3), 205–214. doi:10.1093/heapro/17.3.205
- Evans, B. (2006). ‘Gluttony or sloth’: critical geographies of bodies and morality in (anti) obesity policy. *Area*, 38(3), 259–267.
- Ezzy, D. (2002). *Qualitative analysis: practice and innovation*. New South Wales, Australia: Allen & Unwin.



## References

- Featherstone, M. (2003). The body in consumer culture. In B. Clarke, M. Doel, & K. Housiaux (Eds.), *The consumption reader* (pp. 163–167). London: Routledge.
- Feldens, C. A., Vitolo, M. R., Rauber, F., Cruz, L. N., & Hilgert, J. B. (2012). Risk factors for discontinuing breastfeeding in southern Brazil: a survival analysis. *Maternal and Child Health Journal*, 16(6), 1257–1265.
- Fetters, M. D., & Freshwater, D. (2015). The 1 + 1 = 3 Integration Challenge. *Journal of Mixed Methods Research*, 9(2), 115–117.
- Fewtrell, M. S., Morgan, J. B., Duggan, C., Gunnlaugsson, G., Hibberd, P. L., Lucas, A., & Kleinman, R. E. (2007). Optimal duration of exclusive breastfeeding: what is the evidence to support current recommendations? *American Journal of Clinical Nutrition*, 85(2), 635S–638S.
- Fildes, V. (1980). Neonatal feeding practices and infant mortality during the 18th century. *Journal of Biosocial Science*, 12(03), 313–324.
- Fildes, V. (1986). Artificial feeding: the incidence of, and reasons for, handfeeding. In *Breasts, bottles and babies: a history of infant feeding* (pp. 262–295). Edinburgh: Edinburgh University Press.
- Fildes, V. (1986a). *Breasts, bottles and babies: a history of infant feeding*. Edinburgh: Edinburgh University Press.
- Fildes, V. (1986b). Wet nursing: wet nursing as a social institution. In *Breasts, bottles and babies: a history of infant feeding* (pp. 152–165). Edinburgh: Edinburgh University Press.
- Ford, P. B., & Dzewaltowski, D. A. (2011). Neighborhood deprivation, supermarket availability, and BMI in low-income women: a multilevel analysis. *Journal of Community Health*, 36(5), 785–796.
- Forsyth, D. (1911). The history of infant-feeding from Elizabethan times. *Proceedings of the Royal Society of Medicine*, 4(Sect Study Dis Child), 110–141.
- Foss, K. A. (2010). Perpetuating “scientific motherhood”: infant feeding discourse in Parents magazine, 1930–2007. *Women Health*, 50(3), 297–311.
- Foucault, M. (1977). *Discipline and punish: the birth of the prison*. Harmondsworth, UK: Penguin Books.
- Foucault, M. (1980). The history of sexuality. Vol. 1: An introduction. New York: Vintage Books, Random House.
- Fox, B., & Worts, D. (1999). Revisiting the critique of medicalized childbirth A contribution to the sociology of birth. *Gender and Society*, 13(3), 326–346.

## References

- Frank, A. (1997). *The Diary of a Young Girl*. (O. Frank & M. Pressler, Eds., S. Massotty, Trans.). London: Penguin. (Original work published 1952).
- Freed, G. L., Fraley, J. K., & Schanler, R. J. (1992). Attitudes of expectant fathers regarding breast-feeding. *Pediatrics*, 90(2, Pt 1), 224–227.
- Frerichs, L., Andsager, J. L., Campo, S., Aquilino, M., & Stewart Dyer, C. (2006). Framing breastfeeding and formula-feeding messages in popular U.S. magazines. *Women Health*, 44(1), 95–118.
- Garcia, A. H., Voortman, T., Baena, C. P., Chowdhury, R., Muka, T., Jaspers, L., . . . van den Hooven, E. H. (2016). Maternal weight status, diet, and supplement use as determinants of breastfeeding and complementary feeding: a systematic review and meta-analysis. *Nutrition Reviews*, 74(8), 490–516.
- Germov, J., & Williams, L. (2004). *A sociology of food and nutrition: the social appetite*. South Melbourne, Victoria: Oxford University Press.
- Giddens, A. (1993). *New rules of sociological method: a positive critique of interpretative method*. California: Stanford University Press.
- Gillies, V. (2005). Raising the ‘meritocracy’: parenting and the individualization of social class. *Sociology*, 39(5), 835–853.
- Giugliani, E. R. J., Horta, B. L., Loret de Mola, C., Lisboa, B. O., & Victora, C. G. (2015). Effect of breastfeeding promotion interventions on child growth: a systematic review and meta-analysis. *Acta Paediatrica*, 104, 20–29.
- Gomes, C. F., Trezza, E., Murade, E., & Padovani, C. R. (2006). Surface electromyography of facial muscles during natural and artificial feeding of infants. *Jornal de pediatria*, 82(2), 103–109.
- Graham, H. (1987). Women's smoking and family health. *Social Science and Medicine*, 25(1), 47–56.
- Graham, H. (2009). *Understanding health inequalities*. Berkshire, England: McGraw-Hill.
- Graham, H., & McDermott, E. (2006). Qualitative research and the evidence base of policy: insights from studies of teenage mothers in the UK. *Journal of Social Policy*, 35(01), 21–37.
- Grenfell, M. (2008). *Pierre Bourdieu: key concepts*. Durham, UK: Acumen Publishing.

## References

- Grenfell, M., & James, D. (2004). Change in the field – changing the field: Bourdieu and the methodological practice of educational research. *British Journal of Sociology of Education*, 25(4), 507–523.
- Grosse Frie, K., & Janssen, C. (2009). Social inequality, lifestyles and health – a non-linear canonical correlation analysis based on the approach of Pierre Bourdieu. *International Journal of Public Health*, 54(4), 213–221.
- Grosz, E. A. (1994). *Volatile bodies: Toward a corporeal feminism*. Bloomington, IN: Indiana University Press.
- Guillermo, J., Gonzalez-Perez, M. G., Vega-Lopez, C., CP., & Samuel R, V. (2010). Sociodemographic factors associated with early cessation of breastfeeding in Guadalajara, Mexico. *Ecology of Food and Nutrition*, 40:1, 67–84.
- Gura, T. (2014). Nature's first functional food. *Science*, 345(6198), 747–749.
- Haas, L. (2003). Parental leave and gender equality: lessons from the European Union. *Review of Policy Research*, 20(1), 89–114.
- Hage, G. (2013). *Key thinkers: Ghassan Hage (p1–2) on Pierre Bourdieu* [Retrieved from [https://www.youtube.com/watch?v=AfBiw9F\\_oUw](https://www.youtube.com/watch?v=AfBiw9F_oUw)
- Hanel, B. (2012). *The impact of paid maternity leave on labour market outcomes*. Retrieved from <http://apo.org.au/node/30983>
- Hansen, E.C. (2006). *Successful Qualitative Health Research: A practical introduction*. Allen and Unwin, Crows Nest, NSW. Ch. 6.
- Harner, H. M., & McCarter-Spaulding, D. (2004). Teenage mothers and breastfeeding: does paternal age make a difference? *J Hum Lact*, 20(4), 404–408.
- Hartmann, P. E., & Prosser, C. G. (1984). Physiological basis of longitudinal changes in human milk yield and composition. *Fed Proc*, 43(9), 2448–2453.
- Hartmann, P. E., Sherriff, J. L., & Mitoulas, L. R. (1998). Homeostatic mechanisms that regulate lactation during energetic stress. *The Journal of Nutrition*, 128(2 Suppl), 394S–399S.
- Hashimoto, N., McCourt, C., Dykes, F., & Moran, V. (2009). From ‘to learn’ to ‘to know’: women’s embodied knowledge of breastfeeding in Japan. *Infant and Young Child Feeding*, 59–79.
- Hauck, Y. L., Fenwick, J., Dhaliwal, S. S., & Butt, J. (2011). A Western Australian survey of breastfeeding initiation, prevalence and early cessation patterns. *Maternal and Child Health Journal*, 15(2), 260–268.

## References

- Hauck, Y., Hall, W. A., & Jones, C. (2007). Prevalence, self-efficacy and perceptions of conflicting advice and self-management: effects of a breastfeeding journal. *Journal of Advanced Nursing*, 57(3), 306–317.
- Hauck, F. R., Omojokun, O. O., & Siadaty, M. S. (2005). Do pacifiers reduce the risk of sudden infant death syndrome? A meta-analysis. *Pediatrics*, 116(5), e716–e723.
- Hauff, L. E., & Demerath, E. W. (2012). Body image concerns and reduced breastfeeding duration in primiparous overweight and obese women. *American Journal of Human Biology*, 24(3), 339–349.
- Hector, D. J. (2011). Complexities and subtleties in the measurement and reporting of breastfeeding practices. *International Breastfeeding Journal*, 6, 5.
- Heymann, J., & Kramer, M. S. (2009). Public policy and breast-feeding: a straightforward and significant solution. *Canadian Journal of Public Health*, 100(5), 381–383.
- Hirschman, C., & Butler, M. (1981). Trends and differentials in breast feeding: an update. *Demography*, 18(1), 39–54.
- Hoddinott, P., Craig, L. C., Britten, J., & McInnes, R. M. (2012). A serial qualitative interview study of infant feeding experiences: idealism meets realism. *BMJ Open*, 2(2), e000504.
- Hofner, C., Schadler, C., & Richter, R. (2011). When men become fathers: men's identity at the transition to parenthood. *Journal of Comparative Family Studies*, 42(5), 669–686.
- Hooper, L. V., Littman, D. R., & Macpherson, A. J. (2012). Interactions between the microbiota and the immune system. *Science*, 336(6086), 1268–1273.
- Horta, B. L., Kramer, M. S., & Platt, R. W. (2001). Maternal smoking and the risk of early weaning: a meta-analysis. *American Journal of Public Health*, 91(2), 304–307.
- Horta, B. L., Loret de Mola, C., & Victora, C. G. (2015). Long-term consequences of breastfeeding on cholesterol, obesity, systolic blood pressure and type 2 diabetes: a systematic review and meta-analysis. *Acta Paediatrica*, 104, 30–37.
- Horta, B. L., Victora, C., & World Health Organization. (2013). Long-term effects of breastfeeding: a systematic review from World Health Organization <http://www.who.int/iris/handle/10665/79198> - sthash.yvPk8cdw.dpuf

## References

- Hosmer, D. W., May, S., & Lemeshow, S. (2008). *Applied survival analysis; regression modeling of time-to-event data* (2nd ed.). New Jersey: John Wiley & Sons.
- Howard, C. R., Howard, F. M., Lanphear, B., Eberly, S., Oakes, D., & Lawrence, R. A. (2003). Randomized clinical trial of pacifier use and bottle-feeding or cupfeeding and their effect on breastfeeding. *Pediatrics*, 111(3), 511–518.
- Hunter, B. D., Neiger, B., & West, J. (2011). The importance of addressing social determinants of health at the local level: the case for social capital. *Health and Social Care in the Community*, 19(5), 522–530.
- International Board of Lactation Consultants. (2007). Standards of Practice for International Board Certified Lactation Consultants. Retrieved from <http://www.ilca.org/i4a/pages/index.cfm?pageid=1>
- Jaafar, S. H., Jahanfar, S., Angolkar, M., & Ho, J. J. (2012). Effect of restricted pacifier use in breastfeeding term infants for increasing duration of breastfeeding. *Cochrane Database of Systematic Reviews* (7), Cd007202.
- Jenkins, R. (1982). Pierre Bourdieu and the reproduction of determinism. *Sociology*, 16(2), 270–281.
- Jenkins, R. (2002). *Pierre Bourdieu*. New York: Routledge.
- Jessri, M., Farmer, A. P., Maximova, K., Willows, N. D., & Bell, R. C. (2013). Predictors of exclusive breastfeeding: observations from the Alberta pregnancy outcomes and nutrition (APrON) study. *BMC Pediatrics*, 13(1), 77.
- Johns, H. M., Amir, L. H., McLachlan, H. L., & Forster, D. A. (2016). Breast pump use amongst mothers of healthy term infants in Melbourne, Australia: A prospective cohort study. *Midwifery*, 33, 82–89.
- Johnson, S., Leeming, D., Williamson, I., & Lyttle, S. (2013). Maintaining the ‘good maternal body’: expressing milk as a way of negotiating the demands and dilemmas of early infant feeding. *Journal of Advanced Nursing*, 69(3), 590–599.
- Johnson, S., Williamson, I., Lyttle, S., & Leeming, D. (2009). Expressing yourself: a feminist analysis of talk around expressing breast milk. *Social Science and Medicine*, 69(6), 900–907.
- Johnston-Robledo, I., Sheffield, K., Voigt, J., & Wilcox-Constantine, J. (2007). Reproductive shame: self-objectification and young women's attitudes toward their reproductive functioning. *Women and Health*, 46(1), 25–39.

## References

- Kehler, H. L. M., Chaput, K. H. M., & Tough, S. C. P. (2009). Risk factors for cessation of breastfeeding prior to six months postpartum among a community sample of women in Calgary, Alberta. *Canadian Journal of Public Health, 100*(5), 376–380.
- Kendler, K. S., Kuhn, J., & Prescott, C. A. (2004). The interrelationship of neuroticism, sex, and stressful life events in the prediction of episodes of major depression. *American Journal of Psychiatry, 161*.
- King, A. (2000). Thinking with Bourdieu against Bourdieu: a ‘practical’ critique of the habitus. *Sociological Theory, 18*(3), 417–433.
- Kitzinger, J. (1994). The methodology of FGs: the importance of interaction between research participants. *Sociology of Health and Illness, 16*(1), 103–121.
- Kleinbaum, D., & Klein, M. (2005). *Survival analysis: a self-learning text (statistics for biology and health)* (3rd Ed.). New York: Springer.
- Knaak, S. J. (2010). Contextualising risk, constructing choice: Breastfeeding and good mothering in risk society. *Health, Risk and Society, 12*(4), 345–355.
- Kramer, M., Barr, R., Dagenais, S., Yang, H., Jones, P., Ciofani, L., & Jane, F. (2001). Pacifier use, early weaning, and cry/fuss behavior: A randomized controlled trial. *Journal of the American Medical Association, 286*(3), 322–326.
- Kramer, M. S., Chalmers, B., Hodnett, E. D., Sevkovskaya, Z., Dzikovich, I., Shapiro, S., Helsing, E. (2000). Promotion of breastfeeding intervention trial (PROBIT): a cluster-randomized trial in the Republic of Belarus. Design, follow-up, and data validation. *Advances in Experimental Medicine and Biology, 478*, 327–345.
- Kramer, M. S., Guo, T., Platt, R. W., Sevkovskaya, Z., Dzikovich, I., Collet, J. P., Bogdanovich, N. (2003). Infant growth and health outcomes associated with 3 mo compared with 6 mo of exclusive breastfeeding. *American Journal of Clinical Nutrition, 78*(2), 291–295.
- Kramer, M. S., & Kakuma, R. (2012). The optimal duration of exclusive breastfeeding: a systematic review. *Advances in Experimental Medicine and Biology, 554*, 63–77.
- Kramer, M. S., Seguin, L., Lydon, J., & Goulet, L. (2000). Socioeconomic disparities in pregnancy outcome: why do the poor fare so poorly? *Paediatric and Perinatal Epidemiology, 14*(3), 194–210.

## References

- Kristiansen, A. L., Lande, B., Overby, N. C., & Andersen, L. F. (2010). Factors associated with exclusive breast-feeding and breast-feeding in Norway. *Public Health Nutrition*, 13(12), 2087–2096.
- Kulski, J. K., & Hartmann, P. E. (1981). Changes in the concentration of cortisol in milk during different stages of human lactation. *The Australian Journal of Experimental Biology and Medical Science*, 59(Pt 6), 769–778.
- Ladomenou, F., Kafatos, A., & Galanakis, E. (2007). Risk factors related to intention to breastfeed, early weaning and suboptimal duration of breastfeeding. *Acta Paediatrica*, 96(10), 1441–1444.
- Lancet. (2016). Breastfeeding: achieving the new normal. *Lancet*, 387(10017), 404.
- Lawler, S. (2005). Introduction: class, culture and identity. *Sociology*, 39(5), 797–806.
- Laws, P. J., Tracy, S. K., & Sullivan, E. A. (2010). Perinatal outcomes of women intending to give birth in birth centers in Australia. *Birth*, 37(1), 28–36.
- Lee, E. (2007). Health, morality, and infant feeding: British mothers' experiences of formula milk use in the early weeks. *Sociology of Health and Illness*, 29(7), 1075–1090.
- Lee, E. (2008). Living with risk in the age of 'intensive motherhood': Maternal identity and infant feeding. *Health, Risk and Society*, 10(5), 467–477.
- Lewallen, L. P., Dick, M. J., Flowers, J., Powell, W., Zickefoose, K. T., Wall, Y. G., & Price, Z. M. (2006). Breastfeeding support and early cessation. *Journal of Obstetric, Gynecologic, and Neonatal Nursing*, 35(2), 166–172.
- Lewallen, L. P., Dick, M. J., Wall, Y., Zickefoose, K. T., Hannah, S. H., Flowers, J., & Powell, W. (2006). Toward a clinically useful method of predicting early breast-feeding attrition. *Applied Nursing Research*, 19(3), 144–148.
- Li, R., Darling, N., Maurice, E., Barker, L., & Grummer-Strawn, L. M. (2005). Breastfeeding rates in the United States by characteristics of the child, mother, or family: the 2002 National Immunization Survey. *Pediatrics*, 115(1), 31–37.
- Little, R. J., D'Agostino, R., Cohen, M. L., Dickersin, K., Emerson, S. S., Farrar, J. T., Stern, H. (2012). The prevention and treatment of missing data in clinical trials. *New England Journal of Medicine*, 367(14), 1355–1360.
- Little, R. J., & Rubin, D. B. (1989). The analysis of social science data with missing values. *Sociological Methods and Research*, 18(2-3), 292–326.
- Little, R. J., & Rubin, D. B. (2014). *Statistical analysis with missing data*. New Jersey: John Wiley & Sons.

## References

- Lupton, D. (1996). Food, the family and childhood. In *Food, the Body and Self* (pp. 37–67). London: SAGE.
- Lunnay, B., Ward, P., & Borlagdan, J. (2011). The practise and practice of Bourdieu: The application of social theory to youth alcohol research. *International Journal of Drug Policy*, 22(6), 428–436.
- MacGregor, E., & Hughes, M. (2010). Breastfeeding experiences of mothers from disadvantaged groups: a review. *Journal of Community Practice*, 83(7), 30–33.
- MacVicar, S., Kirkpatrick, P., Humphrey, T., & Forbes-McKay, K. E. (2015). Supporting breastfeeding establishment among socially disadvantaged women: a meta-synthesis. *Birth*, 42(4), 290–298.
- Malacrida, C., & Low, J. (2008a). Foucault, femininity, and the modernization of patriarchal power. In *Sociology of the body: A reader* (pp. 22–27). Canada: Oxford University Press.
- Malacrida, C., & Low, J. (2008b). Risky bodies. In *Sociology of the body; A reader* (pp. 149–204). Canada: Oxford University Press.
- Marmot, M. G. (2006). Status syndrome: a challenge to medicine. *The Journal of the American Medical Association*, 295(11), 1304–1307.
- Marshall, J. L., Godfrey, M., & Renfrew, M. J. (2007). Being a ‘good mother’: managing breastfeeding and merging identities. *Social Science and Medicine*, 65(10), 2147–2159.
- Martin, E. (1990). The woman in the body: a cultural analysis of reproduction. *Birth*, 17(3), 169–171.
- McCarter-Spaulding, D. E., & Kearney, M. H. (2001). Parenting self-efficacy and perception of insufficient breast milk. *Journal of Obstetric, Gynecologic, & Neonatal Nursing*, 30(5), 515–522.
- McFadden, A., Mason, F., Baker, J., Begin, F., Dykes, F., Grummer-Strawn, L., . . . Renfrew, M. J. (2016). Spotlight on infant formula: coordinated global action needed. *Lancet*, 387(10017), 413–415.
- McHoul, A., & Grace, W. (2015). Discourse. In *A Foucault Primer: Discourse, Power And The Subject* (pp. 26–56). New York, USA: Taylor and Francis.
- McInnes, R. J., & Chambers, J. A. (2008). Supporting breastfeeding mothers: qualitative synthesis. *Journal of Advanced Nursing*, 62(4), 407–427.



## References

- McInnes, R. J., Love, J. G., & Stone, D. H. (2000). Evaluation of a community-based intervention to increase breastfeeding prevalence. *Journal of Public Health and Medicine*, 22(2), 138–145.
- Mephem, T. B. (1993). "Humanizing" Milk: The formulation of artificial feeds for infants (1850–1910). *Medical History*, 37, 225–249.
- Mezzacappa, E. S., & Katkin, E. S. (2002). Breast-feeding is associated with reduced perceived stress and negative mood in mothers. *Health Psychology*, 21.
- Miles, M. B., & Huberman, M. A. (1994). *Qualitative data analysis: an expanded sourcebook* (2nd Ed). California: SAGE.
- Millar, J. (1999). State, family and personal responsibility. In A. A. Graham (Ed.), *The sociology of the family: a reader* (pp. 254–260). Oxford, UK Blackwell.
- Miller, T. (2007). "Is this what motherhood is all about?": weaving experiences and discourse through transition to first-time motherhood. *Gender and Society*, 21(3), 337–358.
- Mirkovic, K. R., Perrine, C. G., Scanlon, K. S., & Grummer-Strawn, L. M. (2014). Maternity leave duration and full-time/part-time work status are associated with US mothers' ability to meet breastfeeding intentions. *Journal of Human Lactation*, 30(4), 416–419.
- Moffat, T. (2001). A biocultural investigation of the weanling's dilemma in Kathmandu, Nepal: do universal recommendations for weaning practices make sense? *Journal of Biosocial Science*, 33(3), 321–338.
- Moore, E. R., Anderson, G. C., Bergman, N., & Dowswell, T. (2012). Early skin-to-skin contact for mothers and their healthy newborn infants. *Cochrane Database Systematic Reviews*, 5, CD003519.
- Mortazavi, F., Mousavi, S. A., Chaman, R., Wambach, K. A., Mortazavi, S. S., & Khosravi, A. (2015). Breastfeeding practices during the first month postpartum and associated factors: impact on breastfeeding survival. *Iran Red Crescent Medical Journal*, 17(4), e27814.
- Mossman, M., Heaman, M., Dennis, C.-L., & Morris, M. (2008). The influence of adolescent mothers' breastfeeding confidence and attitudes on breastfeeding initiation and duration. *Journal of Human Lactation*, 24(3), 268–277.
- Murcott, A. (1993). Talking of good food: An empirical study of women's conceptualizations. *Food and Foodways*, 5(3), 305–318.

## References

- Murphy, E. (1999). 'Breast is best': Infant feeding decisions and maternal deviance. *Sociology of Health and Illness*, 21(2), 187–208.
- Murphy, E. (2000). Risk, responsibility, and rhetoric in infant feeding. *Journal of Contemporary Ethnography*, 29(3), 291–325.
- Murphy, E. (2003). Expertise and forms of knowledge in the government of families. *The Sociological Review*, 51(4), 433–462.
- Murray, P. E. (2002). Exposure to possible risk is unethical. *Archives of Pediatrics and Adolescent Medicine*, 156(1), 87; author reply 88.
- Mykletun, A., Bjerkeset, O., Dewey, M., Prince, M., Overland, S., & Stewart, R. (2007). Anxiety, depression, and cause-specific mortality: the HUNT study. *Psychosomatic Medicine*, 69.
- National Health and Medical Research Council. (2003). *Dietary guidelines for children and adolescents in Australia*. Retrieved from: <https://www.nhmrc.gov.au/guidelines-publications/n29-n30-n31-n32-n33-n34>
- National Health and Medical Research Council. (2012). *Infant Feeding Guidelines*. Retrieved from: [https://www.eatforhealth.gov.au/sites/default/files/files/the\\_guidelines/n56\\_infant\\_feeding\\_guidelines.pdf](https://www.eatforhealth.gov.au/sites/default/files/files/the_guidelines/n56_infant_feeding_guidelines.pdf)
- National Health and Medical Research Council. (2012). *Literature review: Infant Feeding Guidelines*. Retrieved from [https://www.nhmrc.gov.au/\\_files\\_nhmrc/publications/attachments/n56a\\_infant\\_feeding\\_literature\\_review\\_150206.pdf](https://www.nhmrc.gov.au/_files_nhmrc/publications/attachments/n56a_infant_feeding_literature_review_150206.pdf)
- National Health and Medical Research Council. (2013). *Australian Dietary Guidelines*. Canberra: Australian Government Retrieved from <http://www.nhmrc.gov.au/guidelines/publications/n55>.
- Nelson, A. M. (2009). Adolescent attitudes, beliefs, and concerns regarding breastfeeding. *American Journal Maternal/Child Nursing*, 34(4), 249–255.
- Nommsen-Rivers, L. A. (2016). Does insulin explain the relation between maternal obesity and poor lactation outcomes? An overview of the literature. *Advances in Nutrition: An International Review Journal*, 7(2), 407–414.
- Nommsen-Rivers, L. A., Chantry, C. J., Peerson, J. M., Cohen, R. J., & Dewey, K. G. (2010). Delayed onset of lactogenesis among first-time mothers is related to maternal obesity and factors associated with ineffective breastfeeding. *The American Journal of Clinical Nutrition*, 92(3), 574–584.

## References

- O'Brien, E., Myles, P., & Pritchard, C. (2016). The portrayal of infant feeding in British women's magazines: a qualitative and quantitative content analysis. *Journal of Public Health (Oxford)*.
- O'Brien, M., Fallon, A., Brodribb, W., & Hegney, D. (2007). Reasons for stopping breastfeeding: what are they, what characteristics relate to them, and are there underlying factors? *Birth Issues*, 15(3-4), 105–113.
- O'Sullivan, E. J., Perrine, C. G., & Rasmussen, K. M. (2015). Early breastfeeding problems mediate the negative association between maternal obesity and exclusive breastfeeding at 1 and 2 months postpartum. *Journal of Nutrition*, 145(10), 2369–2378.
- O'Connor, N. R., Tanabe, K. O., Siadat, M. S., & Hauck, F. R. (2009). Pacifiers and breastfeeding: A systematic review. *Archives of Pediatrics and Adolescent Medicine*, 163(4), 378–382.
- Odom, E. C., Li, R., Scanlon, K. S., Perrine, C. G., & Grummer-Strawn, L. (2013). Reasons for earlier than desired cessation of breastfeeding. *Pediatrics*, 131(3), 726–732.
- Oribe, M., Lertxundi, A., Basterrechea, M., Begiristain, H., Santa Marina, L., Villar, M., Ibarluzea, J. (2015). Prevalence of factors associated with the duration of exclusive breastfeeding during the first 6 months of life in the INMA birth cohort in Gipuzkoa. *Gaceta Sanitaria*, 29(1), 4–9.
- Palkovitz, R. (1985). Fathers' birth attendance, early contact, and extended contact with their newborns: a critical review. *Child Development*, 56(2), 392–406.
- Pang, W. W., & Hartmann, P. E. (2007). Initiation of human lactation: secretory differentiation and secretory activation. *Journal of Mammary Gland Biology and Neoplasia*, 12(4), 211–221.
- Patton, M. Q. (2005). Qualitative research. In *Encyclopedia of Statistics in Behavioral Science*. New Jersey: John Wiley & Sons, Ltd.
- Peat, J. K., Allen, J., Nguyen, N., Hayen, A., Oddy, W. H., & Mihrshahi, S. (2004). Motherhood meets epidemiology: measuring risk factors for breast-feeding cessation. *Public Health Nutrition*, 7(8), 1033–1037.
- Petersen, A., & Lupton, D. (2000). *The new public health: health and self in the age of risk*. London: SAGE.
- Pink, B. (2011a). *Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA), Australia, 2011. Technical Paper*. Retrieved from:

## References

- [http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/22CEDA8038AF7A0DCA257B3B00116E34/\\$File/2033.0.55.001\\_seifa\\_2011\\_technical\\_paper.pdf](http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/22CEDA8038AF7A0DCA257B3B00116E34/$File/2033.0.55.001_seifa_2011_technical_paper.pdf)
- Pink, B. (2011b). *Socio-economic indexes for areas (SEIFA)–Technical paper*. Retrieved from:  
[http://www.ausstats.abs.gov.au/Ausstats/subscriber.nsf/0/22CEDA8038AF7A0DCA257B3B00116E34/\\$File/2033.0.55.001%20seifa%202011%20technical%20paper.pdf](http://www.ausstats.abs.gov.au/Ausstats/subscriber.nsf/0/22CEDA8038AF7A0DCA257B3B00116E34/$File/2033.0.55.001%20seifa%202011%20technical%20paper.pdf)
- Piwoz, E. G., & Huffman, S. L. (2015). The impact of marketing of breast milk substitutes on WHO – recommended breastfeeding practices. *Food and Nutrition Bulletin*, Dec,36(4), 373–386.
- Popay, J., Thomas, C., Williams, G., Bennett, S., Gatrell, A., & Bostock, L. (2003). A proper place to live: health inequalities, agency and the normative dimensions of space. *Social Science and Medicine*, 57(1), 55–69.
- Popay, J., & Williams, G. (1996). Public health research and lay knowledge. *Social Science and Medicine*, 42(5), 759–768.
- Pope, C., & Mays, N. (1995). Qualitative research: reaching the parts other methods cannot reach. An introduction to qualitative methods in health and health services research. *BMJ*, 311(6996), 42–45.
- Portney, L. G., & Watkins, M. P. (2009). *Foundations of clinical research: applications to practice* (3rd ed.). New Jersey, US: Pearson Education
- Power, E. M. (1999). An introduction to Pierre Bourdieu's key theoretical concepts. *Journal for the Study of Food and Society*, 3(1), 48–52.
- Power, E. M. (2005). Determinants of healthy eating among low-income Canadians. *Canadian Journal of Public Health*, 96, S37–42, S42–38.
- Quinlan, R. J., & Quinlan, M. B. (2008). Human lactation, pair-bonds, and alloparents: a cross-cultural analysis. *Human Nature*, 19(1), 87–102.
- Rayfield, S., Oakley, L., & Quigley, M. A. (2015). Association between breastfeeding support and breastfeeding rates in the UK: a comparison of late preterm and term infants. *BMJ Open*, 5(11).
- Regan, P., & Ball, E. (2013). Breastfeeding mothers' experiences: the ghost in the machine. *Qualitative Health Research*, 23(5), 679–688.
- Reid, J., Schmied, V., Sheehan, A., & Fenwick, J. (2013). 'Be our guest': challenges and benefits of using 'family conversations' to collect qualitative data about

## References

- infant feeding and parenting. *Journal of Clinical Nursing*, 23(17-18), 2404–2412.
- Rempel, L. A., & Rempel, J. K. (2011). The breastfeeding team: the role of involved fathers in the breastfeeding family. *Journal of Human Lactation*, 27(2), 115–121.
- Renfrew, M. J., Craig, D., Dyson, L., McCormick, F., Rice, S., King, S. E., . . . Williams, A. F. (2009). Breastfeeding promotion for infants in neonatal units: a systematic review and economic analysis. *Health Technology Assessment*, 13(40), 1–146, iii-iv.
- Renfrew, M. J., McCormick, F., Wade, A., Quinn, B., & Dowswell, T. (2012). Support for healthy breastfeeding mothers with healthy term babies. *Cochrane Database Systematic Reviews*, 5.
- Requejo, J. H., Bryce, J., Barros, A. J., Berman, P., Bhutta, Z., Chopra, M., . . . Maliqi, B. (2015). Countdown to 2015 and beyond: fulfilling the health agenda for women and children. *Lancet*, 385(9966), 466–476.
- Rivera Alvarado, I., Vazquez Garcia, V., Davila Torres, R. R., & Parrilla Rodriguez, A. M. (2006). Exploratory study: breastfeeding knowledge, attitudes towards sexuality and breastfeeding, and disposition towards supporting breastfeeding in future Puerto Rican male parents. *Puerto Rico Health Sciences Journal*, 25(4), 337–341.
- Robbins, D. (2000a). *Pierre Bourdieu* (Vol. 3). London: SAGE.
- Robbins, D. (2000b). *Pierre Bourdieu* (Vol. 1). London: SAGE.
- Rollins, N. C., Bhandari, N., Hajeebhoy, N., Horton, S., Lutter, C. K., Martines, J. C., Victor, C. G. (2016). Why invest, and what it will take to improve breastfeeding practices? *Lancet*, 387(10017), 491–504.
- Royal Australasian College of Physicians, R. (2009). Paediatrics and child health. Retrieved from <http://www.racp.edu.au/page/policy-and-advocacy/paediatrics-and-child-health>
- Ryan, K., Bissell, P., & Alexander, J. (2009). Moral work in women's narratives of breastfeeding. *Social Science and Medicine*, 70(6), 951–958.
- Ryan, K., Team, V., & Alexander, J. (2013). Expressionists of the twenty-first century: the commodification and commercialization of expressed breast milk. *Medical Anthropology*, 32(5), 467–486.

## References

- Ryan, K., Todres, L., & Alexander, J. (2011). Calling, permission, and fulfillment: the interembodied experience of breastfeeding. *Qualitative Health Research*, 21(6), 731–742.
- Ryan, K. M., & Grace, V. M. (2001). Medicalization and women's knowledge: the construction of understandings of infant feeding experiences in post-WW II New Zealand. *Health Care for Women International*, 22(5), 483–500.
- Sakalidis, V. S., Williams, T. M., Garbin, C. P., Hepworth, A. R., Hartmann, P. E., Paech, M. J., & Geddes, D. T. (2012). Ultrasound imaging of infant sucking dynamics during the establishment of lactation. *Journal of Human Lactation*, 29, 205–213.
- Sankar, M. J., Sinha, B., Chowdhury, R., Bhandari, N., Taneja, S., Martines, J., & Bahl, R. (2015). Optimal breastfeeding practices and infant and child mortality: a systematic review and meta-analysis. *Acta Paediatrica*, 104, 3–13.
- Savage, M., & Silva, E. B. (2013). Field analysis in cultural sociology. *Cultural Sociology*, 7(2), 111–126.
- Schmidt, J. (2008). Gendering in infant feeding discourses: the good mother and the absent father. *New Zealand Sociology*, 23(2), 61.
- Schmied, V., & Lupton, D. (2001). Blurring the boundaries: breastfeeding and maternal subjectivity. *Sociology of Health and Illness*, 23(2), 234–250.
- Scott, J. A., Binns, C. W., Graham, K. I., & Oddy, W. H. (2009). Predictors of the early introduction of solid foods in infants: results of a cohort study. *BMC Pediatrics*, 9, 60.
- Scott, J. A., Binns, C. W., Oddy, W. H., & Graham, K. I. (2006). Predictors of breastfeeding duration: evidence from a cohort study. *Pediatrics*, 117.
- Scott, J. A., & Mostyn, T. (2003). Women's experiences of breastfeeding in a bottle-feeding culture. *Journal of Human Lactation*, 19(3), 270–277.
- Sellen, D. W. (2007). Evolution of infant and young child feeding: implications for contemporary public health. *Annual Review of Nutrition*, 27, 123–148.
- Sellen, D. W. (2009). Evolution of human lactation and complementary feeding: implications for understanding contemporary cross-cultural variation. In G. Goldberg, R., Prentice, A., Prentice, A., Filteau, A., Simondon, K. (Eds.), *Breast-feeding: early influences on later life* (pp. 253–281). New York: Springer Science + Business Media.

## References

- Shakespeare, J., Blake, F., & Garcia, J. (2004). Breast-feeding difficulties experienced by women taking part in a qualitative interview study of postnatal depression. *Midwifery*, 20(3), 251–260.
- Shaw, R. (2004). Performing breastfeeding: embodiment, ethics and the maternal subject. *Feminist Review*(78), 99–116.
- Sheehan, A., & Bowcher, W. L. (2016). Messages to new mothers: an analysis of breast pump advertisements. *Maternal and Child Nutrition*.
- Sheehan, A., Schmied, V., & Barclay, L. (2010). Complex decisions: theorizing women's infant feeding decisions in the first 6 weeks after birth. *Journal of Advanced Nursing*, 66(2), 371–380.
- Sheehan, D., Watt, S., Krueger, P., & Sword, W. (2006). The impact of a new universal postpartum program on breastfeeding outcomes. *Journal of Human Lactation*, 22(4), 398–408. doi:22/4/398 [pii] 10.1177/0890334406293434
- Shilling, C. (2003a). The body and physical capital. In *The Body and Social Theory* (2nd ed., pp. 88–110). London: SAGE.
- Shilling, C. (2003b). The naturalistic body. In *The body and social theory* (2nd ed, pp. 37–61. London: SAGE.
- Shilling, C. (2003c). The socially constructed body. In *The body and social theory* (2nd ed., pp. 62–87). London: SAGE.
- Sinha, B., Chowdhury, R., Sankar, M. J., Martines, J., Taneja, S., Mazumder, S., . . . Bhandari, N. (2015). Interventions to improve breastfeeding outcomes: a systematic review and meta-analysis. *Acta Paediatrica*, 104, 114–134.
- Smith, P. H., Coley, S. L., Labbok, M. H., Cupito, S., & Nwokah, E. (2012). Early breastfeeding experiences of adolescent mothers: a qualitative prospective study. *International Breastfeeding Journal*, 7(1), 13.
- Spencer, R. L. (2008). Research methodologies to investigate the experience of breastfeeding: a discussion paper. *International Journal of Nursing Studies*, 45(12), 1823–1830.
- Spurles, P. K., & Babineau, J. (2011). A qualitative study of attitudes toward public breastfeeding among young Canadian men and women. *Journal of Human Lactation*, 27(2), 131–137.
- Stearns, C. A. (1999). Breastfeeding and the good maternal body. *Gender and Society*, 13(3), 308–325.

## References

- Su, M., & Ouyang, Y. Q. (2016). Father's role in breastfeeding promotion: lessons from a quasi-experimental trial in China. *Breastfeeding Medicine*.
- Swartz, D. L. (2003). From critical sociology to public intellectual: Pierre Bourdieu and politics. In *Theory and Society*, 32(5), 791–823.
- Tarrant, M., Lok, K. Y., Fong, D. Y., Lee, I. L., Sham, A., Lam, C., . . . Dodgson, J. E. (2015). Effect of a hospital policy of not accepting free infant formula on in-hospital formula supplementation rates and breast-feeding duration. *Public Health Nutrition*, 1–11.
- Tashakkori, A., & Teddlie, C. (2010). *Sage handbook of mixed methods in social and behavioral research* (2nd ed.). Los Angeles: SAGE Publications.
- Taylor, C. (1986). Foucault on freedom and truth. In D. Couzens Hoy (Ed.), *Foucault: a critical reader* (pp. 69–102). Oxford, UK: Blackwell.
- Taylor, J. S., Kacmar, J. E., Nothnagle, M., & Lawrence, R. A. (2005). A systematic review of the literature associating breastfeeding with type 2 diabetes and gestational diabetes. *Journal of the American College of Nutrition*, 24(5), 320–326.
- Teddlie, C., & Tashakkori, A. (2009). *Foundations of mixed methods research: integrating quantitative and qualitative approaches in the social and behavioral sciences*. California: SAGE.
- Thomas-Jackson, S. C., Bentley, G. E., Keyton, K., Reifman, A., Boylan, M., & Hart, S. L. (2015). In-hospital breastfeeding and intention to return to work influence mothers' breastfeeding intentions. *Journal of Human Lactation*.
- Thome, M., Alder, E. M., & Ramel, A. (2006). A population-based study of exclusive breastfeeding in Icelandic women: is there a relationship with depressive symptoms and parenting stress? *International Journal of Nursing Studies*, 43.
- Thompson, R. E., Kildea, S. V., Barclay, L. M., & Kruske, S. (2011). An account of significant events influencing Australian breastfeeding practice over the last 40 years. *Women and birth: Journal of the Australian College of Midwives*, 24(3), 97–104.
- Throop, C. J., & Murphy, K. M. (2002). Bourdieu and phenomenology: A critical assessment. *Anthropological Theory*, 2(2), 185–207.
- Tissot, H., Favez, N., Ghisletta, P., Frascarolo, F., & Despland, J.-N. (2016). A longitudinal study of parental depressive symptoms and coparenting in the first 18 months. *Family Process*, doi:10.1111/famp.12213



## References

- Tohotoa, J., Maycock, B., Hauck, Y. L., Howat, P., Burns, S., & Binns, C. W. (2009). Dads make a difference: an exploratory study of paternal support for breastfeeding in Perth, Western Australia. *International Breastfeeding Journal*, 4, 15.
- UNICEF. (2016). The Baby-Friendly Hospital Initiative. Retrieved from <http://www.unicef.org/programme/breastfeeding/baby.htm>
- UNICEF–World Health Organization. (1990). Innocenti Declaration. Retrieved from <http://www.unicef.org/programme/breastfeeding/innocenti.htm>
- Uvnäs-Moberg, K., Widström, A. M., Nissen, E., & Björvell, H. (1990). Personality traits in women 4 days postpartum and their correlation with plasma levels of oxytocin and prolactin. *Journal of Psychosomatic Obstetrics and Gynecology*, 11(4), 261–273.
- Van Esterik, P. (2002). Contemporary trends in infant feeding research. *Annual Review of Anthropology*, 31, 257–278.
- Victora, C. G., Bahl, R., Barros, A. J., Franca, G. V., Horton, S., Krasevec, J., . . . Rollins, N. C. (2016). Breastfeeding in the 21st century: epidemiology, mechanisms, and lifelong effect. *Lancet*, 387(10017), 475–490.
- Virgina, S., & Deborah, L. (2001). Blurring the boundaries: breastfeeding and maternal subjectivity. *Sociology of Health and Illness*, 23(2), 234–250.
- Walsh, A., Kearney, L., & Dennis, N. (2015). Factors influencing first-time mothers' introduction of complementary foods: a qualitative exploration. *BMC Public Health*, 15(1), 939.
- Warin, M., Turner, K., Moore, V., & Davies, M. (2008). Bodies, mothers and identities: rethinking obesity and the BMI. *Sociology of Health and Illness*, 30(1), 97–111.
- Watkins, S., Meltzer-Brody, S., Zolnoun, D., & Stuebe, A. (2011). Early breastfeeding experiences and postpartum depression. *Obstetrics and Gynecology*, 118(2, Part 1), 214–221.
- Web, J., Schirato, T., Danaher, G. (2002). *Understanding Bourdieu*. Sydney: Allen & Unwin.
- Webb-Girard, A., Cherobon, A., Mbugua, S., Kamau-Mbuthia, E., Amin, A., & Sellen, D. W. (2012). Food insecurity is associated with attitudes towards exclusive breastfeeding among women in urban Kenya. *Maternal and Child Nutrition*, 8(2), 199–214.

## References

- White, K. (2013). *An introduction to the sociology of health and illness* (2nd ed.). London: SAGE.
- Whitmarsh, J. (2008). Mums, dummies and 'dirty dids': the dummy as a symbolic representation of mothering? *Children and Society*, 22(4), 278–290.
- Wickes, I. G. (1953a). A history of infant feeding. Vol. I. Primitive peoples, ancient works, Renaissance writers. *Archives of Disease in Childhood*, 28(138), 151–158.
- Wickes, I. G. (1953b). A history of infant feeding. Vol. II. Seventeenth and eighteenth centuries. *Archives of Disease in Childhood*, 28(139), 232–240.
- Wickes, I. G. (1953c). A history of infant feeding. Vol. IV. Nineteenth century. *Archives of Disease in Childhood*, 28(141), 416–422.
- Wickes, I. G. (1953d). A history of infant feeding. Vol. V. Nineteenth century (concluded) and twentieth century. *Archives of Disease in Childhood*, 28(142), 495–502.
- Williams, S. J. (1995). Theorising class, health and lifestyles: can Bourdieu help us? *Sociology of Health and Illness*, 17(5), 577–604.
- Wise, P. H. (2009). Confronting social disparities in child health: a critical appraisal of life-course science and research. *Pediatrics*, 124 Suppl 3, S203–211.
- Wall, G. (2001). Moral constructions of motherhood in breastfeeding discourse. *Gender & Society*, 15(4), 592–610.
- Wolf, J. H. (2003). Low breastfeeding rates and public health in the United States. *American Journal of Public Health*, 93(12), 2000–2010.
- Wolf, J. B. (2007). Is breast really best? Risk and total motherhood in the national breastfeeding awareness campaign. *Journal of Health Politics, Policy and Law*, 32(4), 595–636.
- World Health Organization, Executive Board. (1979). Formulating strategies for health for all by the year 2000: progress report – report of the Programme Committee of the Executive Board (Government Report ). (EB65/4). Retrieved from World Health Organization  
<http://apps.who.int/iris/handle/10665/154359> - sthash.WBhy87zU.dpuf
- World Health Organization. (1981). *Contemporary patterns of breast-feeding: report on the WHO Collaboration Study on Breast-feeding*. Retrieved from:  
<https://extranet.who.int/iris/restricted/handle/10665/40079>

## References

- World Health Organization. (1998). *Evidence for the Ten Steps to Successful Breastfeeding*. Retrieved from:  
[http://www.who.int/maternal\\_child\\_adolescent/documents/9241591544/en/](http://www.who.int/maternal_child_adolescent/documents/9241591544/en/)
- World Health Organization. (2001, August 10, 2014). International code of marketing of breast milk substitutes. Retrieved from:  
[http://www.who.int/nut/documents/code\\_english.PDF](http://www.who.int/nut/documents/code_english.PDF).
- World Health Organization. (2001). World Health Organisation Collaborative Study Team on the role of breastfeeding on the prevention of infant mortality: effect of breastfeeding on infant and child mortality due to infectious diseases in less developed countries – a pooled analysis. *Lancet*, 355, 451–455.
- World Health Organization. (2007). Indicators for assessing infant and young child feeding practices; Part 1 Definitions. Retrieved from: World Health Organisation [http://www.who.int/maternal\\_child\\_adolescent/documents/9789241596664/en/](http://www.who.int/maternal_child_adolescent/documents/9789241596664/en/)
- World Health Organization. (2010). *International statistical classification of diseases and related health problems (ICD)10th Revision*. Geneva: World Health Organization(WHO). Retrieved from <http://apps.who.int/classifications/apps/icd/icd10online/>.
- World Health Organization. (2011). *Summary Report: World Conference on Social Determinants of Health*. Retrieved from: [http://www.who.int/sdhconference/resources/Conference\\_Summary\\_Report.pdf](http://www.who.int/sdhconference/resources/Conference_Summary_Report.pdf)
- World Health Organization. (2015). World Health Statistics 2013. Retrieved from World Health Organization [http://www.who.int/gho/publications/world\\_health\\_statistics/2013/en/](http://www.who.int/gho/publications/world_health_statistics/2013/en/)
- World Health Organization. (2016). Health topics: Breastfeeding. Retrieved from <http://www.who.int/features/factfiles/breastfeeding/en/>
- World Health Organization–UNICEF. (1989). *Protecting, promoting, and supporting breast-feeding: the special role of maternity services* (9241561300). Retrieved from: <http://www.who.int/nutrition/publications/infantfeeding/9241561300/en/>
- World Health Organization–UNICEF. (1990). *Breastfeeding in the 1990s: review and implications for a global strategy, based on the technical meeting, Geneva, 25-28 June 1990*. Retrieved from:  
[https://extranet.who.int/iris/restricted/bitstream/10665/61550/1/WHO\\_MCH\\_NUT\\_90.2.pdf](https://extranet.who.int/iris/restricted/bitstream/10665/61550/1/WHO_MCH_NUT_90.2.pdf)

## References

- World Health Organization–UNICEF. (2003). *Global Strategy on Infant and Young Child Feeding*. Retrieved from: [http://www.who.int/nutrition/topics/infantfeeding\\_recommendation/en/index.html](http://www.who.int/nutrition/topics/infantfeeding_recommendation/en/index.html)
- World Health Organization–UNICEF. (2009). *Baby Friendly Hospital Initiative, revised, updated and expanded for integrated care. Section 1: Background and implementation*. Retrieved from: [http://www.who.int/nutrition/publications/infantfeeding/bfhi\\_trainingcourse\\_s1/en/](http://www.who.int/nutrition/publications/infantfeeding/bfhi_trainingcourse_s1/en/)
- World Health Organization–UNICEF. (2012). *Global Strategy on Infant and Young Child Feeding*. Retrieved from: [http://www.who.int/maternal\\_child\\_adolescent/documents/9241562218/en/](http://www.who.int/maternal_child_adolescent/documents/9241562218/en/)
- World Health Organization–UNICEF. (2014). Global nutrition targets 2025: breastfeeding policy brief. Retrieved from [http://apps.who.int/iris/bitstream/10665/149022/1/WHO\\_NMH\\_NHD\\_14.7\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/149022/1/WHO_NMH_NHD_14.7_eng.pdf)
- World Health Organization, UNICEF, & International Baby Food Action Network. (2016). *Marketing of breast milk substitutes: national implementation of the international code. Status Report 2016*. Retrieved from: [http://apps.who.int/iris/bitstream/10665/206008/1/9789241565325\\_eng.pdf?ua=1&ua=1](http://apps.who.int/iris/bitstream/10665/206008/1/9789241565325_eng.pdf?ua=1&ua=1)
- Wright, A., & Schanler, R. (2001). The resurgence of breastfeeding at the end of the second millennium. *The Journal of Nutrition*, 131(2), 421S–425S.
- Yngve, A., & Sjostrom, M. (2001). Breastfeeding determinants and a suggested framework for action in Europe. *Public Health Nutrition*, 4(2B), 729–739.
- Ystrom, E. (2012). Breastfeeding cessation and symptoms of anxiety and depression: a longitudinal cohort study. *BMC Pregnancy and Childbirth*, 12(1), 1–6.
- Zimmerman, D. R., & Guttman, N. (2001). "Breast is best": knowledge among low-income mothers is not enough. *Journal of Human Lactation*, 17(1), 14–19

## APPENDICES

### **Appendix 1. The Baby-Friendly Hospital Initiative (BFHI) Ten Steps** TEN STEPS TO SUCCESSFUL BREASTFEEDING

Every facility providing maternity services and care for newborn infants should:

1. Have a written breastfeeding policy that is routinely communicated to all healthcare staff.
2. Train all healthcare staff in skills necessary to implement this policy.
3. Inform all pregnant women about the benefits and management of breastfeeding.
4. Help mothers initiate breastfeeding within a half-hour of birth.
5. Show mothers how to breastfeed, and how to maintain lactation even if they should be separated from their infants.
6. Give newborn infants no food or drink other than breast milk unless medically indicated.
7. Practise rooming in – allow mothers and infants to remain together – 24 hours a day.
8. Encourage breastfeeding on demand.
9. Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants.
10. Foster the establishment of breastfeeding support groups and refer mothers

(WHO–UNICEF, 2009)

## **Appendix 2. The Innocenti Declaration**

Recognising that:

Breastfeeding is a unique process that:

Provides ideal nutrition for infants and contributes to their healthy growth and development.

Reduces incidence and severity of infectious diseases, thereby lowering infant morbidity and mortality.

Contributes to women's health by reducing the risk of breast and ovarian cancer, and by increasing the spacing between pregnancies.

Provides social and economic benefits to the family and the nation.

Provides most women with a sense of satisfaction when successfully carried out; and that

Recent Research has found that:

These benefits increase with increased exclusiveness of breastfeeding during the first six months of life, and thereafter with increased duration of breastfeeding with complementary foods, and

Programme intervention can result in positive changes in breastfeeding behaviour

We therefore declare that:

As a global goal for optimal maternal and child health and nutrition, all women should be enabled to practise exclusive breastfeeding and all infants should be fed exclusively on breast milk from birth to 4-6 months of age. Thereafter, children should continue to be breastfed, while receiving appropriate and adequate complementary foods, for up to two years of age or beyond. This child-feeding ideal is to be achieved by creating an appropriate environment of awareness and support so that women can breastfeed in this manner.

Attainment of this goal requires, in many countries, the reinforcement of a "breastfeeding culture" and its vigorous defence against incursions of a "bottle-feeding culture". This requires commitment and advocacy for social mobilization, utilizing to the full the prestige and authority of acknowledged leaders of society in all walks of life.

Efforts should be made to increase women's confidence in their ability to

breastfeed. Such empowerment involves the removal of constraints and influences that manipulate perceptions and behaviour towards breastfeeding, often by subtle and indirect means. This requires sensitivity, continued vigilance, and a responsive and comprehensive communications strategy involving all media and addressed to all levels of society. Furthermore, obstacles to breastfeeding within the health system, the workplace and the community must be eliminated.

Measures should be taken to ensure that women are adequately nourished for their optimal health and that of their families. Furthermore, ensuring that all women also have access to family planning information and services allows them to sustain breastfeeding and avoid shortened birth intervals that may compromise their health and nutritional status, and that of their children.

All governments should develop national breastfeeding policies and set appropriate national targets for the 1990s. They should establish a national system for monitoring the attainment of their targets, and they should develop indicators such as the prevalence of exclusively breastfed infants at discharge from maternity services, and the prevalence of exclusively breastfed infants at four months of age.

National authorities are further urged to integrate their breastfeeding policies into their overall health and development policies. In so doing they should reinforce all actions that protect, promote and support breastfeeding within complementary programmes such as prenatal and perinatal care, nutrition, family planning services, and prevention and treatment of common maternal and childhood diseases. All healthcare staff should be trained in the skills necessary to implement these breastfeeding policies.

### Operational Targets

All governments by the year 1995 should have:

Appointed a national breastfeeding coordinator of appropriate authority, and established a multisectoral national breastfeeding committee composed of representatives from relevant government departments, non-governmental

organizations, and health professional associations

Ensured that every facility providing maternity services fully practises all 10 of the Ten Steps to Successful Breastfeeding set out in the joint WHO–UNICEF statement "Protecting, promoting and supporting breastfeeding: the special role of maternity services".

Taken action to give effect to the principles and aim of all Articles of the International Code of Marketing of Breast-Milk Substitutes and subsequent relevant World Health Assembly resolutions in their entirety; and

Enacted imaginative legislation protecting the breastfeeding rights of working women and established means for its enforcement

We also call upon international organizations to:

Draw up action strategies for protecting, promoting and supporting breastfeeding, including global monitoring and evaluation of their strategies

Support national situation analyses and surveys and the development of national goals and targets for action; and

Encourage and support national authorities in planning, implementing, monitoring and evaluating their breastfeeding policies.

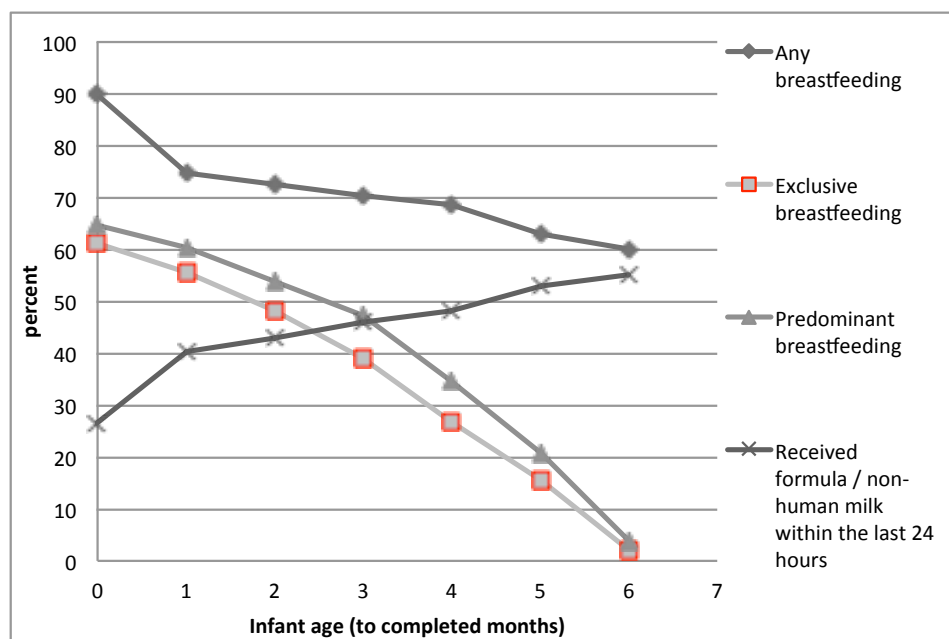
The Innocenti Declaration was produced and adopted by participants at the WHO–UNICEF policymakers' meeting on "Breastfeeding in the 1990s: A Global Initiative", co-sponsored by the United States Agency for International Development (AID) and the Swedish International Development Authority (SIDA), held at the Spedale degli Innocenti, Florence, Italy, from July 30 – August 1, 1990. The declaration reflects the content of the original background document for the meeting and the views expressed in group and plenary sessions.

(WHO–UNICEF, 1990, 2009)



### Appendix 3. AIHW national infant feeding practices, 2010

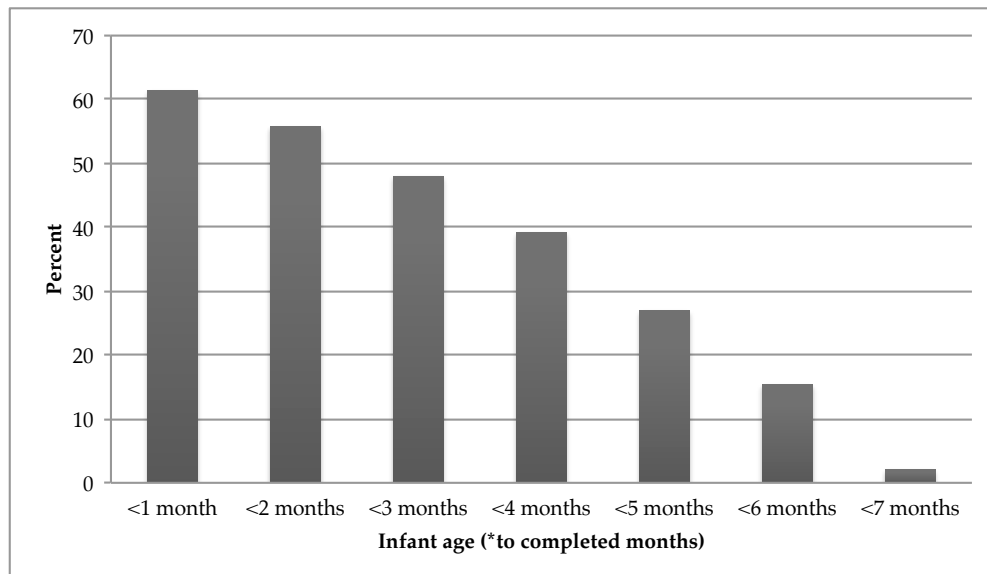
Figure 7. Australian national infant feeding practices up to six months, 2010



Data source: Australian Institute of Health and Welfare National Infant Feeding Practices Survey-2010 (AIHW, 2011a)

**Appendix 3.1 AIHW national infant feeding practices, 2010**

*Figure 8. Proportion of Australian infants exclusively breastfeeding up to the first 6 completed months*



Data source Australian Institute of Health and Welfare National Infant Feeding Practices Survey 2010.(AIHW, 2011a)

\*Note: indicates an infant's age the month before a fluid other than breast milk was introduced. This is effectively the month before another fluid was introduced. For example, a child who was introduced to water when they were aged 4 months (in their fifth month of life) was exclusively breastfed to 4 months of age (that is, they had 4 completed months of exclusive breastfeeding). Similarly, a child who was introduced to water at age 1 month (in their second month of life) was exclusively breastfed to 1 month. Or, a child who was introduced to water at 0 months (in their first month of life) was exclusively breastfed to 0 months (or for less than 1 month).

#### **Appendix 4. Access agreement to the Australian Data Archive**

Thank you for completing the ADA Restricted Undertaking Agreement and requesting access to the data listed in the copy of the agreement below. Once your request has been processed, you will receive an acknowledgement email and will be given access to the data requested.

Please keep this email as a copy of the agreement: Tuesday, November 6, 2012

I HEREBY UNDERTAKE that I will use the data file(s) **01244 - Australian National Infant Feeding Survey, 2010**

(hereinafter called 'the materials') supplied to me by the Australian Data Archive for non-commercial research and educational purposes only, **in accordance with and subject to the Conditions of Use set out below**. I also consent to my name and institutional affiliation being provided to the data owners so they may collect information about the usage of their data and make contact with colleagues with similar interests.

**Conditions of Use:** I acknowledge that:

1. Use of the materials is restricted to non-commercial research and educational purposes only. The materials are not to be used for any other purpose without the express written permission of the Australian Data Archive National Manager.
2. Use of the materials for the following purposes is not permitted:
3. Transmitting or allowing access to the materials in part or whole to any other person / Department / Organization not a party to this undertaking; and
4. Attempting to match the materials in whole or in part with any other information for the purposes of attempting to identify individuals, households or organizations.
5. Outputs such as statistical tables, graphs, diagrams and interpretations obtained from my analysis of these materials may be further disseminated provided that I:
6. Acknowledge both the original depositors and the Australian Data Archive;
7. Acknowledge another archive where the data file is made available through the Australian Data Archive by another archive;
8. Declare that those who carried out the original analysis and collection of the data bear no responsibility for the further analysis or interpretation of it; and
9. Provide the Australian Data Archive with the bibliographic details and, where available, online links to any published work (including journal articles, books or book chapters, conference presentations, theses or any other publications or outputs) based wholly or in part on the material.

10. Use of the material is solely at my risk and I indemnify the Australian Data Archive and its host institutions including the Australian National University, the University of Melbourne, the University of Queensland, the University of Technology, Sydney and the University of Western Australia.
11. The Australian Data Archive and its host institutions including the Australian National University, the University of Melbourne, the University of Queensland, the University of Technology, Sydney and the University of Western Australia shall not be held responsible for the accuracy and completeness of the material supplied.
12. The Australian Data Archive should be notified of any errors discovered in the materials.
13. At the conclusion of my research, any new data collections which have been derived from the materials supplied should be offered for deposit in the ADA collection. The deposit of the derived materials will include sufficient explanatory documentation to enable their use by others.
14. At the conclusion of my research, all copies of the materials, including temporary copies, CDs, personal copies, back-ups, derived datasets and all electronic copies should be destroyed.

Signed

Jennifer Ayton: PhD Candidate

University of Tasmania / Menzies Research Institute

Australian Data Archive The Australian National University Building 66, 18 Balmain Lane Acton,  
ACT 0200 Australia Telephone 61 2 6125 4400 Fax 61 2 6125 0627 Website:  
<https://users.ada.edu.au/>

## Appendix 5. TAS Infant Feeding Study: FG Ethics Approval documents

Social Science Ethics Officer Private Bag 01 Hobart Tasmania 7001 Australia Tel: (03) 6226 2763 Fax: (03) 6226 7148 [Katherine.Shaw@utas.edu.au](mailto:Katherine.Shaw@utas.edu.au)

---

HUMAN RESEARCH ETHICS COMMITTEE (TASMANIA) NETWORK

22 September 2011

Ms Jennifer Ayton Menzies Research Institute Private Bag 23 Hobart Tasmania

Dear Ms Ayton

Re: APPROVAL FOR AMENDMENT TO CURRENT PROJECT Ethics Ref: **H0011838** - **Investigating the breastfeeding experiences, attitudes and knowledge of Tasmanian mothers with infants/children aged from 0-24 months**

Amendment to add in-depth interviews to the project. Amendment to include women in the study who have a child older than 24 months. Sample interview guide. Advertisement. Poster flyer. Revised information sheet. Interview consent form.

We are pleased to advise that the Chair of the Tasmania Social Sciences Human Research Ethics Committee approved the Amendment to the above project on 20 September 2011.

Yours sincerely

Katherine Shaw Acting Executive Officer

---

---

Social Science Ethics Officer  
Private Bag 01 Hobart  
Tasmania 7001 Australia  
Tel: (03) 6226 2763  
Fax: (03) 6226 7148  
Katherine.Shaw@utas.edu.au



---

HUMAN RESEARCH ETHICS COMMITTEE (TASMANIA) NETWORK

---

15 July 2011

Ms Jennifer Ayton  
Menzies Research Institute  
Private Bag 23  
Hobart TAS 7001

Dear Ms Ayton

Re: FULL ETHICS APPLICATION APPROVAL  
Ethics Ref: H0011838 - Investigating the breastfeeding experiences, attitudes and knowledge of Tasmanian mothers with infants aged from 0-24 months

---

We are pleased to advise that the Tasmania Social Sciences Human Research Ethics Committee approved the above project on 14 July 2011.

Please note that this approval is for four years and is conditional upon receipt of an annual Progress Report. Ethics approval for this project will lapse if a Progress Report is not submitted.

The following conditions apply to this approval. Failure to abide by these conditions may result in suspension or discontinuation of approval.

1. It is the responsibility of the Chief Investigator to ensure that all investigators are aware of the terms of approval, to ensure the project is conducted as approved by the Ethics Committee, and to notify the Committee if any investigators are added to, or cease involvement with, the project.
2. Complaints: If any complaints are received or ethical issues arise during the course of the project, investigators should advise the Executive Officer of the Ethics Committee on 03 6226 7479 or [human.ethics@utas.edu.au](mailto:human.ethics@utas.edu.au).
3. Incidents or adverse effects: Investigators should notify the Ethics Committee immediately of any serious or unexpected adverse effects on participants or unforeseen events affecting the ethical acceptability of the project.

A PARTNERSHIP PROGRAM IN CONJUNCTION WITH THE DEPARTMENT OF HEALTH AND HUMAN SERVICES

## Appendix 6. TAS Infant Feeding Study: FG Consent form



### **INTERVIEW CONSENT FORM:**

**Investigating the infant feeding experiences, attitudes and knowledge of Tasmanian mothers with infants aged 0-36 months**

1. I have read and understood the 'Information Sheet' for this project.
2. The nature and possible effects of the study have been explained to me. I understand that the study involves *completing a short questionnaire and participating in an interview / group discussion of approximately 45-120 minutes duration*.
3. I understand that the risk identified for this research is that some women may find discussing their experiences of infant feeding evokes anxiety or the recall of painful memories.
4. I understand that all research data will be securely stored on the University of Tasmania premises for at least five years, and will be destroyed when no longer required.
6. Any questions that I have asked have been answered to my satisfaction.
7. I agree that research data gathered from me for the study may be published provided that I cannot be identified as a participant.
8. I understand that the researchers will maintain my identity confidentially and that any information I supply to the researcher(s) will be used only for the purposes of the research.
9. I agree to participate in this interview and understand that I may withdraw at any time without any effect, and if I so wish may request that any data I have supplied to date be withdrawn from the research.

Name of Participant: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

### **Statement by Investigator**

☐ I have explained the project & the implications of participation in it to this volunteer and I believe that the consent is informed and that he/she understands the implications of participation

If the Investigator has not had an opportunity to talk to participants prior to them participating, the following must be ticked.

Name of investigator \_\_\_\_\_

Signature of investigator \_\_\_\_\_

Date \_\_\_\_\_

## Appendix 7. TAS Infant Feeding Study: FG study information (participants)



### **STUDY INFORMATION SHEET**

#### **Investigating the infant feeding experiences, attitudes and knowledge of Tasmanian mothers with infants aged from 0-36 months**

##### **Introduction**

We are inviting mothers to participate in a focus group and/or an interview to talk about their experiences of feeding an infant. We are interested in all aspects of feeding babies including breastfeeding, stopping breastfeeding, not wanting or being able to breastfeed, bottle feeding with formula or expressed breastmilk, and weaning. This research is being conducted by researchers from the UTAS School of Sociology and Social Work and the Menzies Research Institute Tasmania. The research is funded by the Tasmanian Early Years Foundation. The research will be used to develop strategies to better support mothers and families who are feeding babies.

##### **Who are the researchers?**

Dr Emily Hansen, Ms Jennifer Ayton, Ms Danielle Williams, Ms Leigh Tesch and Professor Mark Nelson.

##### **Who can participate?**

Mothers aged 16 and over, with babies aged 0 to 36 months.

##### **What will I be asked to do?**

Complete a short questionnaire and participate in a focus group session and/or an interview.

**Focus Groups:** Focus groups usually have between 6-8 group members and a facilitator. The session will run between 60 and 85 minutes. Complimentary drinks and food will be provided. You may bring your baby with you and if you need to bring other children please let us know and we will organise some toys and someone to watch them. The focus group will be audio-recorded and researchers will take written notes. During the session, the facilitator will ask group members questions about their experiences and views on infant feeding and show pictures of mothers and babies to stimulate discussion. We will try to organise sessions at a time and location that best suits you. If you have been contacted through a pre-existing group such as a parenting group the session will run in conjunction with your group's usual time and location. For those focus groups run with mothers who are not members of a pre-existing group, we will arrange a venue and if needed assist with transport.

**Interviews:** You can choose to only participate in an interview (rather than a focus group) or you may be asked to participate in an interview by one of the researchers after you have been in a focus group. An interview usually runs for between 45 to 120 minutes and will be held at a time and in a location that best suits you. The interview will be audio-recorded and the interviewer may take written notes.

##### **How will my confidentiality be protected?**

Your anonymity and the confidentiality of your responses will be protected. We will not record your name or address. Data transcribed from focus groups and interviews will be de-identified (using false names) and the data will be combined with data from other focus groups. However, because there will be other participants in the focus group, confidentiality can never be complete. All participants will be asked to respect each other's confidentiality.





## Appendix 8. TAS Infant Feeding Study: FG study guide and prompt

### TAS Infant Feeding Study Copy of draft focus group questions and prompts

The following questions will be used to facilitate group discussions. As such each focus group will vary slightly from each other and additional questions may be asked by the facilitator.

Preamble	<p>Introductions and roles Any questions before we start?</p> <p>Talks through the information sheet (explains purpose of study, confidentiality, audio recording etc.). Request that all views are treated respectfully. Confirms consent. Completion of questionnaire- check each questionnaire for completion.</p> <p>Ice Breaker Question: "Please tell us your first name and the name and age of your baby"</p>
Prompts	<p>How are you feeding your babies today?</p> <ul style="list-style-type: none"> <li>• What have you enjoyed and not enjoyed?</li> <li>• What has worked or not worked?</li> <li>• Are you happy with the way you are currently feeding?</li> </ul>
	Have you had any problems feeding your baby?
	<p>Can you tell us:</p> <ul style="list-style-type: none"> <li>• What /who has <u>helped</u> you to feed your baby the way you wanted to?</li> <li>• What / who <u>did not</u> help you to feed your baby the way you wanted to?</li> </ul>
	<p>Tell us about help and support?</p> <ul style="list-style-type: none"> <li>• Where and who?</li> </ul>
	<p>What needs to change to better support mothers'/parents choices in how and when and where they feed their babies?</p> <p>Where do health professionals (GPs, midwives, child health nurses) fit in?</p> <p>Is there a good time to offer help ?</p>
Final question	Is there anything else that anyone feels that we should have talked about but didn't?

## Appendix 9. TAS Infant Feeding Study: FG Study demographic questionnaire.



Participant ID:

Date:   /   /

### Investigating the Infant Feeding Experiences, Attitudes and Knowledge of Tasmanian mothers with infants aged from 0 to 24 months

Thank you for agreeing to take part in the Menzie's Research Institute Study: Investigating the Infant Feeding experiences, attitude's and knowledge of Tasmanian mothers with infants aged between 0-24 months.

This study has been funded by the Tasmanian Early Years Foundation

Please fill out this form with regard to yourself and your child

All the information you provide will remain totally confidential. This means that it will never be used in any way that identifies individuals, children or families.

Participation in this study is voluntary. If you have any questions or want more information about the study you can contact Jennifer Ayton 6226 4240 or Dr Emily Hansen 03 6226 1782

#### Instructions: Please read carefully

Indicate your response by filling in the circle next to the most appropriate answer

Example

Shade Circles Like This	<input checked="" type="radio"/>
Not Like This	<input type="radio"/> or <input type="radio"/>
Cross Out Mistakes Like This	<input checked="" type="radio"/>

Or by writing clearly using the boxes where provided.

Please use BLOCK LETTERS where required e.g. 

H	O	B	A	R	T		
---	---	---	---	---	---	--	--

Cross out any mistakes & write correct answer just below the relevant boxes

Please use a black or blue pen if possible

**FG Study demographic questionnaire (continued)**

---

**The first questions are about you (the mother). What is your year of birth?**

**What is the postcode of your normal residence?**

**How many children have you given birth to?** 0 1 2 3 4 5 >6

**Have you ever breastfed before (not including this child)?** Yes No

**What is your current occupation?** (select more than 1 if necessary)

Professional Clerical/Admin Service/Sales Self-employed Home duties Unemployed Student Other  
(please specify)

**Is your occupation full time, part time or casual?**

Full Time Part Time Casual

**Do you smoke?** Yes No

**What is your current marital status?**

Married - Living with partner Married - Separated De-facto partner Divorced Single parent Other  
(please specify)

**What is the highest qualification you have completed? (select one)**

Masters or Doctoral Degree Bachelor degree (including Honours) Graduate Diploma, Diploma, or  
Associate Diploma Certificate (Tertiary) Secondary School only year 11-12 Secondary School Year 10  
and or below Other (please specify)

**In which country were you born?**

Australia United Kingdom New Zealand Vietnam China Philippines Lebanon India South Africa  
Malaysia Fiji Other (please specify)

---

**These questions are about your child aged (0- 24 months)**

**How old is your child today? specify weeks and/or months and/or years**

**What is your child's Sex?**

**What was this child's weight at birth? grams**

**After how many weeks of pregnancy was this child born? e.g. 33.5 weeks**

**Was this child a single birth or a twin, triplet or more?**

**Where was this child born?**

**What type of birth or delivery did you have for this child?**

Normal

Breech Caesarean Vacuum Extraction Forceps Other (please specify) Don't Know

Single birth Twin Triplet More than triplets Don't know

Home Public Hospital Private Hospital

---

**FEEDING History**

**BEFORE this child was born did you intend to: (Choose one)**

Breastfeed

Formula feed

Both breast and formula feed

Expressed breast milk and formula feed

**How old was your child when he/she completely stopped being breastfed?**

Weeks      Months      Years

Still having breast milk Never breastfed – Go to next question

Don't Know

**How old was your child when he/she was first given infant formula or other non-breast milk regularly?**

Weeks      Months      Years

**Or**

Hasn't had formula or other non-breast milk

Don't Know

**TODAY how is this child fed? (Choose one)**

Exclusive breastfeeding only (includes expressed breast milk)

Exclusive formula milk feeding only

Breast milk and formula (includes expressed breast milk)

Family foods + breast milk (includes expressed breast milk)

Family foods + other milk/fluids (including formula)

*Thank you for completing this questionnaire*

**Appendix 10. Univariate analysis and characteristics of mothers who ceased exclusive breastfeeding within the first six months of their infants' life (N = 22,202)**

Variable	Whole Sample		Event (Cessation Of Exclusive Breastfeeding)		*HR (95%CI)	*p
	n	%	n	%		
Mother						
Age						
35+	6,362	29%	4,946	78%	Ref	
30 to 34	7,911	36%	6,043	76%	0.98(0.95,1.02)	0.407
25 to 29	5,568	25%	4,423	79%	1.08(1.04,1.13)	<0.05
15 to 24	2,146	10%	1,828	85%	1.33(1.26,1.41)	<0.05
Test for trend						<0.05
Educational attainment						
Postgraduate/Bachelor degree	9,098	41%	6,700	74%	Ref	
Diploma/Certificate	7,970	36%	6,509	82%	1.28(1.24,1.33)	<0.05
Year 12 or below	5,092	23%	4,162	82%	1.28(1.23,1.33)	<0.05
Test for trend						<0.05
SEIFA						
Fifth quintile (highest)	5,772	26%	4,375	76%	Ref	
4 <sup>th</sup>	5,091	23%	3,986	78%	1.09(1.04,1.14)	<0.05
3 <sup>rd</sup>	4,648	21%	3,660	79%	1.10(1.05,1.15)	<0.05

2 <sup>nd</sup>	3,554	16%	2,834	80%	1.14(1.09,1.20)	<0.05
1st quintile (lowest)	2,939	13%	2,387	81%	1.19(1.13,1.25)	<0.05
Test for trend						<0.05
Parity						
Two or more	12,222	57%	9,212	75%	Ref	
First time mother	9,218	43%	7,580	82%	1.21(1.17,1.25)	<0.05
Income level						
\$156k or more	2,444	11%	1,838	75%	Ref	
\$88,400-\$155,999	6,823	32%	5,187	76%	1.05(0.99,1.10)	0.085
\$52,000-\$88,399	5,956	28%	4,679	79%	1.10(1.04,1.16)	<0.05
\$26,000-\$51,900	3,651	17%	2,917	80%	1.17(1.10,1.24)	<0.05
\$25,999 or below	2,564	12%	2,156	84%	1.26(1.18,1.34)	<0.05
Test for trend						<0.05
Current smoking status						
No, not at all	19,342	90%	14,906	77%	Ref	
Yes daily or occasionally	2,102	10%	1,889	90%	1.43(1.36,1.50)	<0.05
Current BMI						
Normal	9,309	48%	6,993	75%	Ref	
Underweight	451	2%	356	79%	0.94(0.84,1.04)	<0.05
Overweight and or Obese	9,527	50%	7,694	81%	1.28(1.24,1.32)	<0.05
Test for trend						<0.05

Spouse or Partner living in the house						
Yes	20,628	93%	16,035	78%	Ref	
No	1,488	7%	1,305	88%	1.31(1.24,1.39)	<0.05
Mothers country of birth						
Australia	16,320	74%	12,773	78%	Ref	
Overseas	5,882	26%	4,625	79%	1.01(0.98,1.05)	0.516
Mothers ATSI status						
No	21,779	98%	17,056	78%	Ref	
Yes	322	2%	270	84%	1.13(1.00,1.28)	<0.05
State / Territory of residence						
New South Wales	7,149	32%	5,527	77%	Ref	
Victoria	5,275	24%	4,186	79%	1.03(0.99,1.07)	0.176
Queensland	4,719	21%	3,682	78%	1.07(1.02,1.11)	<0.05
Western Australia	2,218	10%	1,825	82%	1.10(1.04,1.16)	<0.05
South Australia	1,622	7%	1,295	80%	1.04(0.98,1.10)	0.231
Tasmania	534	2%	382	72%	0.88(0.79,0.97)	<0.05
Australian Capital Territory	428	2%	314	73%	0.86(0.77,0.96)	<0.05
Northern Territory	188	1%	138	73%	0.88(0.74,1.04)	0.129
Test for trend						<0.05
Currently on leave from employment						
Yes	11,809	54%	9,312	79%	Ref	



No	10,107	46%	7,865	78%	0.98(0.95,1.01)	0.118
Perinatal depression						
No	19,328	91%	14,969	77%	Ref	
Yes	1,784	9%	1,548	87%	1.26(1.20,1.33)	<0.05
Method of birth						
Vaginal	14,774	67%	11,221	76%	Ref	
Caesarean	7,352	33%	6,115	83%	1.25(1.21,1.29)	<0.05
Sex						
Male	11,211	51%	8,903	79%	Ref	
Female	10,821	49%	8,360	77%	0.96(0.93,0.99)	<0.05
Birth weight (grams)						
≥2500	20,211	95%	15,647	77%	Ref	
**≤2499	1,036	5%	962	93%	1.53(1.43,1.63)	<0.05
Gestational age (weeks)						
Term ≥37	20,652	94%	15,993	77%	Ref	
*Preterm<37	1,285	6%	1,189	93%	1.54(1.45,1.64)	<0.05
Infant received expressed breast milk						
No	9,915	65%	6,727	68%	Ref	
Yes	5,378	35%	3,847	72%	1.17(1.13,1.22)	<0.05
Infant regularly used a dummy / pacifier						
No	10,353	47%	7,368	71%	Ref	

\*Unadjusted hazard ratio (HR): Univariate Cox proportional hazards analysis

**Appendix 11. Relationships between mothers' socioeconomic indexes for area (SEIFA) and mother (n = 108) and infant n = 107)**  
**characteristics from the 22 FGs**

Characteristic	Most disadvantaged SEIFA 1-2		Least disadvantaged SEIFA 3-5		<i>Pearsons Chi squared * p value</i>
	n	%	n	%	
Feeding Intention					0.114
Breast	46	(88)	54	(96)	
Formula and or other	6	(11)	2	(4)	
Previously breastfed (yes)	24	(46)	19	(34)	0.195
Maternal age (years)					<0.001
15-24	22	(42)	6	(11)	
25 & > older	30	(58)	50	(89)	
Parity					0.276
One (given birth once)	31	(44)	39	(56)	
Two or more	21	(55)	17	(45)	
Type of birth					0.725
Singleton	49	(96)	53	(95)	
Maternal smoking (yes)	13	(25)	6	(11)	0.051
Marital status					<0.001
Married - Living with partner	16	(31)	41	(73)	
De-facto partner	21	(40)	10	(18)	

Divorced	1	(2)	2	(4)	
Single parent	14	(27)	3	(5)	
Current Occupation					<0.036
Professional	13	(25)	20	(36)	
Clerical/Admin or Service/Sales	11	(21)	5	(9)	
Home duties /self employed	14	(27)	24	(43)	
Student or unemployed	14	(27)	7	(12)	
Full time	33	(66)	34	(61)	0.573
Part time/casual	17	(34)	22	(39)	
Education status					<0.001
Bachelor degree and or higher	9	(17)	34	(61)	
Diploma / Year 12 and or below	43	(83)	22	(39)	
Country of birth					<0.005
Australia	52	(100)	48	(86)	
Overseas	0	-	8	(14)	
Child gender					0.289
Male	28	(55)	25	(45)	
Female	23	(45)	30	(55)	
Age (months)					0.339
0 to 6 months	19	(37)	15	(29)	
6 months & >	32	(63)	40	(71)	

Birth weight					0.285
<2499g	8	(16)	5	(8)	
>2500g	43	(84)	51	(91)	
Gestational age at birth					0.162
<sup>+</sup> Preterm	8	(16)	4	(7)	
<sup>++</sup> Term	43	(84)	51	(93)	
Place of birth					<0.001
Public Hospital /home	42	(82)	25	(46)	
Private Hospital	9	(18)	30	(54)	
Method of Birth					<0.003
<sup>††</sup> Vaginal delivery	44	(56)	34	(44)	
<sup>†</sup> Caesarean section	7	(24)	22	(76)	
<sup>!</sup> Initiated breastfeeding at birth					0.958
Yes	51	(98)	55	(98)	
Current feeding method					<0.016
<sup>**</sup> Exclusive breastfeeding	8	(16)	8	(14)	
Formula feeding	7	(14)	7	(14)	
Breast milk & formula (includes <sup>*</sup> EBM)	2	(4)	4	(7)	
Family foods & breast milk (includes EBM)	8	(16)	23	(41)	
Family foods & other milk/fluids (includes formula)	26	(50)	13	(23)	

Pearson chi-squared test for significance <sup>\*</sup>*p value* >0.05 considered significant <sup>+</sup>Preterm = born at less than 36.6 completed weeks gestation <sup>++</sup>Term = born on or greater than 37.0 completed weeks gestation. <sup>!</sup> Initiated breastfeeding: breastfed at the breast or received colostrum (ref).

---

<sup>††</sup>Vaginal delivery = normal vaginal and Instrumental (forceps or ventouse) combined <sup>†</sup>Caesarean = combined emergency and elective caesarean delivery

<sup>\*\*</sup>Exclusive breastfeeding = breast milk only no other foods or fluids with the exception of vitamins, oral rehydration solutions <sup>\*</sup>EBM = expressed breast milk

---

## Appendix 12. Analysis of the mothers' practices revealing the underlying organising principles / depositions of the maternal habitus

Physical		Social	
Embodied	Clothing / Accessories	Attitudes / values	Social
Tell me about how you feed your baby?	What helps ? what doesn't ?	How do you feel about that?	Tell me about what it's like to feed (breast / formula-bottle)
<ul style="list-style-type: none"> <li>• Just want to breastfeed; just breastfeed</li> <li>• Breast is best, healthy</li> <li>• Natural way to feed</li> <li>• Good milk</li> <li>• Best milk</li> <li>• It's best for baby</li> <li>• Immune protection</li> <li>• Satisfied baby</li> <li>• Doing what is right</li> <li>• Bonding; feeling close to the baby, connection</li> <li>• Superwomen</li> </ul> <p>Experiences</p> <ul style="list-style-type: none"> <li>• Breasts that work</li> <li>• No milk</li> <li>• Can't get the milk out</li> </ul>	<ul style="list-style-type: none"> <li>• Messy, milk spots, stains</li> <li>• Shrouds to hide the breasts</li> <li>• Shirts loose fitting clothing</li> <li>• Wraps</li> <li>• Leaking on clothes</li> <li>• Expressing equipment</li> <li>• Dummies</li> <li>• Bottles like breasts/nipples</li> </ul>	<ul style="list-style-type: none"> <li>• It's just what you do for you baby</li> <li>• Doing the right thing</li> <li>• Breast is Best</li> <li>• God-given right</li> <li>• Natural and best</li> <li>• I was lucky to breastfeed</li> <li>• As long as I've tried—I gave it a go</li> <li>• A good mother - breast milk</li> <li>• A bad mother - infant formula</li> <li>• Naughty mother - not breastfeeding</li> <li>• Only little babies breastfeed</li> <li>• Just do it [formula] &amp; just get over it</li> <li>• Baby needs to be fed</li> </ul>	<ul style="list-style-type: none"> <li>• Public feeding antisocial</li> <li>• Embarrassment/ shamed by what breasts have become and comments</li> <li>• Baby pulling at top</li> <li>• Hiding away</li> <li>• Expressing</li> <li>• Feeding rooms</li> <li>• Groups of breastfeeding mothers</li> <li>• Shame - feeding in cars</li> <li>• Always leave the room to breast feed</li> <li>• Infant formula</li> <li>• Health advice, nutrition healthy Google, books education</li> <li>• Returning to work</li> <li>• Family /partner wanted me to breastfeed</li> <li>• Feels dirty - anxiety of having to</li> </ul>

<ul style="list-style-type: none"> <li>• Low supply</li> <li>• Leaky breasts</li> <li>• Swollen breasts</li> <li>• Pain, sore bleeding nipples, large nipples, inverted nipples, infection</li> </ul> <p>Changes in the breast during pregnancy;</p> <ul style="list-style-type: none"> <li>• Exploding breasts</li> <li>• Leaking breasts</li> <li>• Painful breasts</li> <li>• Not sexual anymore</li> <li>• Mother /sister breastfeed</li> <li>• Never seen anyone feed their baby</li> <li>• I was formula fed</li> <li>• I was breastfed</li> <li>• Bottles and teats like nipples ‘close to breastfeeding’</li> <li>• Starving my baby with my milk</li> </ul>		<ul style="list-style-type: none"> <li>• Formula always there the option not the choice</li> <li>• Formula tin in dad’s shed</li> <li>• My partner wanted me to breastfeed</li> <li>• Formula is OK it’s for babies not as good as breast milk</li> <li>• Books information /Google</li> <li>• Not appropriate to feed older babies</li> <li>• Not comfortable breastfeeding in public or in front of anyone</li> <li>• Just need to feed him</li> <li>• Formula always there the option not the choice</li> <li>• He is thriving now on formula</li> </ul>	<p>breastfeed</p> <ul style="list-style-type: none"> <li>• Flopping my breasts /boobs out</li> </ul>
<p>*Breastfeeding refers to any feeding from the breast</p> <p>** Dispositions – encompasses three distinct meanings: 1. A set of outcomes; a structure. 2. A propensity or inclination. 3. A way of being or habitual state. (Bourdieu, 1977, p. 245).</p>			